

Councillors draw up new poly body plan

by Peter David

Local government leaders expressed growing confidence this week in their ability to persuade the Government to abandon its proposals to 'nationalize' 98 colleges and polytechnics, leaked in a Department of Education and Science paper last month.

At a special meeting of the Council of Local Education Authorities on Wednesday, members gave their broad agreement to a plan of their own to reorganize the management of public sector higher education but retain local government control.

Under the CLEA proposal, a national body with a majority of council members would be set up to plan the distribution of higher education courses and distribute funds to colleges - leaving individual education authorities free to top up their colleges' budgets at local expense.

The body would include members of the Committee of Directors of Polytechnics, the National Association of Teachers in Further and Education, and representatives of industry and commerce.

A document setting out the CLEA proposal says a body able to maximize the use of resources would have to enjoy close links with the University Grants Committee and call on local expertise and judgment.

Reconstituted regional advisory bodies could be required to collect and channel information on courses and student demand to the central body, or the body could collect the information direct from local education authorities, the paper says.

"In order to exercise sufficient control, the body would need to exert influence over course approvals and even, within agreed limits, to be able to divert funds to particular institutions or authorities to encourage certain activities."

Course transfer angers lecturers

by Paul Flather

Angry lecturers from the Polytechnic of the South Bank have protested strongly to the Inner London Education Authority about an abrupt *volte face* on plans to concentrate polymer science courses at their polytechnic.

Last week an ILEA sub-committee was forced to defer a final decision on to allow South Bank more time to lobby against a new report which recommends polymer science courses should now be moved from South Bank to the Polytechnic of North London (PNL).

The decision is of great significance because ILEA officers are beginning to see it as a pilot scheme for further course rationalizations, likely among the five London polytechnics.

Mr Michael Crook, a member of the South Bank polymers and rubber technology school, said: "To have a report which contained errors and illogical statements and on which we had no time to comment frankly made our blood boil."

The South Bank argues that the original decision reached after lengthy consultations by the Haves Working Party should stand. The Haves report concluded polymers were well integrated with other South Bank engineering work, unlike the courses at PNL.

This week South Bank lecturers were presenting a final brief to a special six-man committee headed by Mrs Ann Ward, chairman of the ILEA further and higher education sub-committee, which will make a final decision shortly.

ILEA officers, however, believe the courses should now be concentrated at PNL for a number of reasons.

A secretariat for the new body would be appointed or seconded from local authorities, the DES and colleges, the paper says. Much of the initial work could, however, be carried out by civil service and local authority staff.

Preparation of the CLEA proposals, which are very similar to those outlined in the 1978 Onkes report, follows a flurry of secret diplomacy by Mr Alistair Lawton, chairman of the CLEA higher education committee and a leading Conservative county councillor.

At separate informal meetings with Mr Carlisle, the Secretary of State for Education and three polytechnic directors, Mr Lawton has given notice of local government's determination to fight to retain its higher education responsibilities.

The meeting with the directors was held at Middlesex Polytechnic two weeks ago and attended by Dr Ray Rickett, chairman of the CDP, Mr David Bethel from Leicester Polytechnic, and Sir Norman Lindop from Hatfield.

The Government has meanwhile gone out of its way to stress that the leaked Cabinet paper proposing an end to local government control of the public sector colleges did not reflect a final decision.

Speaking in Parliament last week Lord Belstead, a Home Office under secretary, said the leaked proposals were only one stage in Government thinking.

He added: "The Secretary of State is determined that if a new management structure is being developed, it should be such as to encourage and develop the distinctive characteristics of higher education in the public sector."

"It is an essential part of the sector's task to cater for the widest possible range of those able to benefit from higher education through all types of course."

Adults' champion slams universities

The universities had only ever paid lip service to adult education, Dr Richard Hoggart, chairman of the Advisory Council for Adult and Continuing Education said this week.

And the only reason they were now making a "death bed repentance" was because in the next decade the number of 18-year-olds would drop by a third and it would become important to justify buildings and staff.

Dr Hoggart was delivering the Ian Gulland memorial lecture at Goldsmiths' College, London, where he is warden.

He said that university adult education had only been saved by the responsible body system whereby the Government directly funds 75 per cent of the teaching costs of extra-mural departments.

"The extra-mural departments had 100 per cent funding from the University Grants Committee they would have their backs to the wall by now," he said.

"The universities are always saying that they are in favour of adult education but when money is tight it is an enormous gain that the extra-mural departments have 75 per cent funding from the Department of Education and Science."

"The universities should feel challenged and criticized," he added. "Reducing adult means changing classes, reorganizing classes and taking lectures to students in far off places like Bexley or Croydon instead of coming here," he said.

"Adult educators had a very long haul ahead of them because they had got to shift the attitudes of those in power and authority to see continuing education as a basic right," Dr Hoggart said.

But he warned that not all education for adults should be free.

APT may join Burnham negotiations

by David Jobbins

The Association of Polytechnic Teachers will soon be offered a place on the Burnham further education committee, leaders of the main lecturers' union fear.

It is also being suggested that the National Association of Schoolmasters/Union of Women Teachers could be included on the committee, which is the legal forum for determining the pay of 80,000 lecturers in college and polytechnics in England and Wales.

The Department of Education confirmed this week that a decision on the composition of the committee was imminent, and it is believed that Mr Mark Carlisle, Secretary of State for Education, will make an announcement in time for the unions to be included when the current round of Burnham talks are completed.

APT, which is not affiliated to the Trades Union Congress, is anxious to be involved in the discussions on salary structure expected to begin in a few weeks.

Informed sources say Mr Carlisle will back recognition despite a report by civil servants suggesting that such action is not justified by the membership figures.

APT told the DES it has about 3,000 members in England and Wales, and NASUWT about 2000 - mainly school staff who retained membership when they transferred to the FE sector.

Dr Tony Pointon, national secretary of APT, said this week they had had no indication of a decision. He said: "Once they have started we are virtually excluded from the 1982 pay round."

APT has sought two seats on the committee on the grounds that only one would be insufficient to cope with the work required in the polytechnic sector.

If Mr Carlisle had decided to grant recognition, he would also be acting contrary to the distinct lack of enthusiasm expressed by the local authority associations for a proliferation of teacher organisations on the committee. Whatever their sympathies for APT, they have been anxious to avoid the difficulties which have arisen on the primary and secondary committee because of the conflicts between rival unions.

Leaders of the main union of Burnham FE, the National Association of Teachers in Further and Higher Education, fear that if recognition is given it will be yet another change made by Mr Carlisle in favour of a review of Burnham. The FE employers and the unions to determine how the review should be led took place this week.

Mr Peter Dawson, general secretary of Natfhe, said this week: "As we have concluded there are no grounds for a case either on merits or on any other grounds."

"On the question of NASUWT position is even more extraordinary. There one is talking about less than 2000 people in a school-based organization scattered around the country. Many have retained their membership for perfectly legitimate sentimental reasons."

But Mr Nigel de Gruy, assistant secretary of the NASUWT, said he had more members than some of the other "minor organizations" on the committee, and that Natfhe, with a members in the schools, had a seat on the primary and secondary committee.



Ivor Brook lambing in the snow near Dorton, one of the pictures by James Ravilious in an exhibition of photographs on aspects of different societies at Southampton University's John Hansard Gallery until April 11.

FE Unit pushes 17-plus exam

An early Government decision on the introduction of the new 17-plus exam is being urged by the Further Education Unit board of management, which means that the existing confused provision of courses in colleges will deteriorate even further.

In a confidential memo to the Department of Education and Science, the board says it is vital that a firm decision be taken by May to allow an approved programme of assessment to begin in September/January in further education.

Unless such a decision is taken soon uncoordinated and competitive curriculum might occur. Competition now exists that did not exist before, and colleges could from September continue with existing exams unless a national alternative is available. "This means that the plethora of FE provision identified in *A Basis for Choice* will become even more confused" the board says.

The board adds that the DES should give immediate approval for an FE examining body to offer a form of 17-plus certificate, compatible with the guidelines described by the department, and monitored by a 17-plus management committee. This should be supported by an adequately-funded programme of evaluation in which both the FEU and Schools Council could play a coordinating role.

The board is also concerned about plans to increase ability range for the new 17-plus. It believes that more advanced study is desirable, but only if this can be done without excluding those for whom the examination is intended.

It is also adamant that continuous assessment should form a significant part of the 17-plus examination.

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Dual funding 'to continue'

Strong support for the future of the dual support system, which finances university research and which is currently being probed by a committee of the Advisory Board for the Research Councils was given by education under secretary Neil Macfarlane this week.

Mr Macfarlane was speaking before the Commons Select Committee on Education and Science's first hearing purely on science matters when he was asked by chairman Mr Christopher Price, MP if research University Grants Committee would mean the concentration of reduced funds on only a few universities and the possible closure of others.

Mr Macfarlane said that the most unlikely and stressed that the present system, in which universities provide laboratories and research councils supply special equipment, would probably be retained although it was now being investigated by a committee led by Alistair Hoggart, MP.

However other aspects of Government science policy came under strong attack this week from the Royal Society in its submission to the House of Lords Select Committee on Science. In particular the Royal Society expressed "very grave concern" about the erosion and downgrading of the posts of chief scientists in the Government department.

The abolition of some quangos has also impaired the Government's ability to draw on outside advice, the Royal Society submission adds.

NEXT WEEK

Medical education: a radical critique. Maurice Kogan on the research role. Interviews with Desmond Morris and David Ingram.

Keith Robbins on William Gerhardt. John Eggleston on in-service education. Four pages of new philosophy books.

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Polytechnic staff stage mass exodus to meet job cuts

by John O'Leary

Lecturers are voting with their feet to achieve the Government's planned cuts in higher education staffing against the wishes of their union.

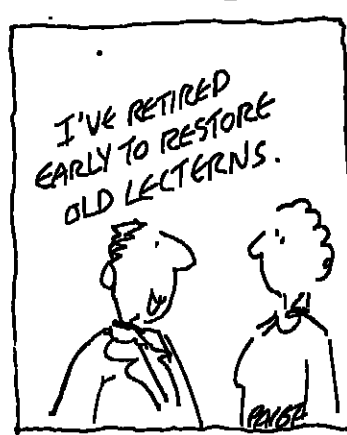
Voluntary redundancies have seen the loss of some 700 posts in further and higher education in little more than a year. And this week it was announced that one in nine teaching staff at Middlesex Polytechnic has opted for early retirement under a temporary scheme designed to transform its finances.

Up to 10 other polytechnics are either operating or planning similar schemes in the face of opposition from the National Association of Teachers in Further and Higher Education. If the Middlesex trend was followed nationally, the reduction of 2,300 lecturers by next year, implied in the Expenditure White Paper, would be reached automatically.

Local authority officials see premature retirement as their best hope of achieving short-term staffing cuts. The Pooling Committee is recommending the authorities' associations and the Secretary of State for Education, Mr Mark Carlisle, to allow up to half the cost of enhancing pensions and redundancy payments to be shared out nationally.

Officers are confident that there will be no shortage of volunteers if favourable redundancy terms are offered and have agreed to recommend an open pool to spread the burden of payments. The experience of Middlesex, where the staff/student ratio has now doubled since the polytechnic was designated in 1973, supports this theory. Staff were given a month to apply for early retirement at the maximum level of compensation and will shed 72 lecturers and 48 non-teaching staff as a result.

It is expected to save the polytechnic £500,000 this year and £900,000 in subsequent years. More than half of the lecturers leaving will be compensated under the Crombie scheme because of their previous employment at Trent



Park or All Saints Colleges, which merged with the polytechnic. Dr Ray Rickett, the polytechnic's director, expressed himself delighted with the outcome of the exercise, which he said would benefit everyone. The institution had been overstaffed because of the addition of under-employed teacher education staff after the mergers. The majority of volunteers have come from education and the performing arts, engineering, science and mathematics.

Some strategic posts are to be retained, but Dr Rickett said that redundancies had fallen fortuitously mostly in the areas where they were required. The polytechnic was now "a slim unit" and should require no more staffing cuts, he added.

Middlesex's lead is already being followed in Hertfordshire, where 75 redundancies are being sought in higher education and a call for volunteers has gone out at Hatfield Polytechnic. Natfhe is protesting at the absence of consultation on the exercise there and is unhappy at the spread of voluntary schemes nationally.

Although premature retirement schemes will have limited effect in the long term because of their restriction to those over 50 years old, the union believes that they are damaging educational provision in some areas. However, it is powerless to prevent its members accepting lucrative offers.

Teacher degree must stay, says DES

by Patricia Santinelli

The threatened BED degree should be preserved as part of a strategy to meet the needs of schools in the 1980s and 1990s, according to a confidential Department of Education and Science report.

The report has been sent to the Advisory Committee for the Supply and Education of Teacher training to advise on the future size and shape of the training system by May.

The DES says the BED is an essential part of the teacher training system because it provides the majority of primary school teachers and those in shortage areas such as craft design and technology, home economics, and business studies. It also provides better professional training than the Postgraduate Certificate of Education.

The paper says: "There will be a continuing need for such provision in both the medium and long term, unless positive measures are taken and resources provided to ensure that supply can equally well be maintained in both quantity and quality through degree courses in universities, polytechnics and colleges followed by the PGCE. Such measures would include an extension of the time devoted to PGCE."

It says that although the PGCE might expand to take up to 40 per cent of all new entrants to primary teaching, it could never be the sole teaching qualification unless it was extended to deal with the elements which currently receive only cursory treatment. It stresses that the PGCE route should be preserved as an important route to secondary teaching, particularly in the shortage areas of maths, science and modern languages.

The case for retaining the currently low-recruiting BED is centred on the argument that the training system must fulfil curricular objectives in the 1980s and 1990s.

"Falling rolls will inevitably reduce the numbers of teachers even if there is an upturn in the economy. Therefore if the quality of education is not to suffer, management of the contraction must be curriculum-led," says the paper.

Initial training might be interpreted as the need to give all intending teachers an understanding of and commitment to one or more areas of the school curriculum. However, there were some important differences in each sector which require the continuation of both the BED and the PGCE to provide the breadth and mix of professional formation.

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Lecturers may go to court

University lecturers are likely to take action against universities to fight compulsory redundancies, and are also expected to stage a massive parliamentary campaign against the cuts.

At an emergency meeting this week of the Association of University Teachers executive plans were being drawn up to resist what they regard as the most serious attack on their members in their history.

One proposal being canvassed was an increase in members' subscriptions from £16.50 to £25 to add to a fighting fund. Already, £100,000 has been set aside for legal and other costs and the executive hopes to increase that to at least a quarter of a million pounds.

The AUT has already taken legal advice on the question of redundancy and the first case will probably be met with an application for an injunction to prevent the university on the grounds

that this would be a breach of the statutes.

Dr Edward Parkes, the chairman of the University Grants Committee has said there will have to be 3,000 redundancies among academic staff if the Government keeps to its proposed spending cuts between now and 1984/85.

Other measures being called for by the AUT include a complete freezing of posts, using equipment grants for recurrent purposes, spending reserves, making cuts in non-salary items, imposing cash limits on travelling costs, and extending restrictions on telephone calls.

A further suggestion is that academic terms should be rearranged to allow universities to make more savings on fuel costs. The AUT has calculated that if measures like these were implemented wholesale, as much as £80-£90m could be saved in one year.

Universe goes into orbit

by Robin McKie

Science correspondent
A unique consortium of universities, private and nationalized companies and Government departments has been formed to establish a major project, costing several million pounds, which could revolutionize computer use in Britain. The programme, known as Universe, is to be given priority to ensure it is in full operation by December and will also involve use of the recently-launched European orbital test satellite (OTS).

Project Universe, which stands for the University Expanded Ring and Satellite Experiment, was recently given £800,000 by the Science Research Council. A similar sum is expected from the Department of Industry and further investment is being made by the companies involved.

At first the research programme will investigate methods of large-scale data transfer between university computer rings via the OTS satellite. These rings, known as Cambridge rings, allow high speed communications between computers and line printers, photocopyers, and visual display units in a local area and the new system is intended to link these rings across Britain.

Apart from revolutionizing computer access and data transfer for all UK universities, the project has important commercial implications. It could allow London business centres to have instant stock control at their subsidiaries round the country, allow large-scale information communications between offices throughout Britain and give a major boost to the UK computer industry as well as establishing a national facility for computer users.

There are eight major institutions involved in the consortium - the Science

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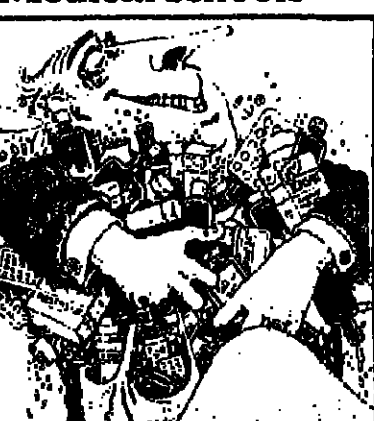
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Contents

Medical schools



Alwyn Smith argues for a more humane and less technological approach to training future doctors in the first of a new series on professional education, 8

Maurice Kogan takes a critical look at recent changes in medical research funding, 10

God's Fifth Column
K.G. Robbins reviews William Gerhardie's eccentric "biography" of his age, 11

Desmond Morris
Robin McKie talks to the Oxford zoologist and successful author in the second of our series on the popularizers of science, 7

Colleges in the cold
John O'Leary discusses the future of those colleges which provide higher education but which will be left out of the Government's plan for a national body, 6

Philosophy books
Ethics teaching in higher education, modern French philosophy, Mill, and Hume are among the subjects of new philosophy books, 13-16

Academics in Ulster
Rodney Barker reports on a recent meeting of academics and politicians to discuss the intractable "troubles" of Northern Ireland, 7

Overseas news
North American news 4
Books 11-16
Science books 17
Noticeboard 18
Classified Index

Opinion
Union view (Natfhe) 25
Keith Hampson MP 25
Don's Diary 25
Laurel Taylor, Lecturer 25
Leaders (professional education, economists' protest), Patrick Nattgens 27

Hard-pressed RCA turns to Europe

by Paul Flather

The Royal College of Art is being forced to turn to Europe to fill up its quota of places next year even though the Government has told the college to produce many more designers to revitalise British industry.

The RCA has decided to prepare a "strenuous campaign" to recruit European students after learning it will receive just 140 Government bursaries next year - a reduction of 27 (14 per cent).

The RCA, currently under the close scrutiny of the Department of Education and Science, said it did not see the move as a punitive step, but it was clearly very serious for the college.

The Government has already warned the RCA its recurrent grant of about £4.5m a year could be reduced in future if it does not "respond effectively" to national needs and priorities.

Last week college governors also decided to begin a complete review of the structures and policy of the RCA as the best way to meet Government criticisms that it has not been fulfilling its charter obligations towards industry.

The criticisms were made in a report by a DES visiting committee made public last month. The report calls for a switch in emphasis away from fine arts towards design management to help British industry.

The review will be supervised by a joint committee of academic staff and governors, and also involve students. It will look at individual departments, schools, and faculties, and will be complete for submission to Dr Rhodes Boyson, under-secretary for higher

education, by the summer. Four working parties set up before the DES report was made available will also continue their work. They are looking at the relation between industrial design and industry; between fine arts and design; the provision of short and mid-career design courses; and college administration.

The RCA has also denied all charges that it has not taken DES criticisms, first raised in 1978, seriously. Professor Christopher Frayling, professor of cultural history, speaking for the college, said the working parties were set up before the DES report arrived formally last month.

"Quick answers are not the order of the day," he said. "This is a matter of the college taking specific and new policy decisions. All the structural effects need to be carefully worked out."

"The loss of bursaries is obviously very serious. We will be exploring ways to attract more students from the EEC to fill the places and we will be advertising the college work internationally."

The college has also selected Mr George Howard, chairman of the BBC, as interim chairman of governors until September. He takes over from Mr Cob Stenham, financial director of Unilever, who resigned last month with five other lay governors.

The RCA said the resignations had been forced because the governors had been engaged in negotiations with the DES, even submitting a dissenting paper, but they were not over major policy disagreements.

Lecturers deplore Macfarlane failure

The Macfarlane committee's failure to recommend the development of a system which could lead to a radical expansion of education and training for all 16-19 years olds was attacked as a tragedy by the leading lecturers' union this week.

The National Association of Teachers in Further and Higher Education is particularly critical of the committee's failure to acknowledge the urgent need of resources for education and training and the severely detrimental effects of Government expenditure cuts on opportunities for young people.

The association repeats its call for the introduction of a universal, continuing system of education, training and employment for the age group. It believes this could be introduced by 1990 and should be based on *A Better Start to Working Life* and the developments of the Youth Opportunities Programme.

Natfhe stresses that this would require the development of full and part-time pre-vocational courses, the continuing of full and part-time vocational courses and radical curricular changes for young people working full time education. Courses should include communication and numeracy skills, citizenship education and induction to employment.

Until now the union has argued for the setting up of a Department of Education and Training. It now believes that a national council with responsibility for education and training might be more politically practical.

Economists unite in protest

Three hundred and sixty four university economists issued a signed statement this week saying that Government economic policy was deepening the depression and threatening the country's social and political stability.

They called for a rejection of monetarist policies, said there was no evidence that inflation would be brought permanently under control by deflating demand and called for alternative policies.

The group, showing an unprecedented unity among economists, included five people who have been chief economic advisers to governments since the war: Professor James Meade, Lord Rotherham, Sir Alec Cairncross, Sir Bryan Hopkin, and Sir Fred Atkinson.

The list includes 34 signatories from Cambridge University, where the statement was organised, 18 from York, 13 from Oxford, 21 from Warwick, 13 from Manchester and 47 from London.

In response, the Treasury issued a statement saying there was "a substantial school of economists who believe that there is a strong connection between monetary growth and the rate of inflation" and said the university economists had been unable to specify any alternatives.

Leader, page 27

Cambridge dons have voted to increase overseas students tuition fees, next year by £400 more than the Government recommended minima.

Industry 'cannot foot retraining bill'

by John O'Leary

Hopes that industry would finance an expansion of continuing education have been firmly quashed by Mr David Stanley, the new head of education and training at the Confederation of British Industry.

Mr Stanley, addressing the annual conference in London of the Association of Colleges Implementing the Diploma in Higher Education, said firms would not stand in the way of those wishing to "find new vistas". Costs would be a real problem which would have to be discussed with Government.

He said: "If employers want to go away and broaden their education as a voluntary matter, that is something to be applauded, but the amount of support employers are going to be able to give is inevitably going to be very limited."

Not was Dr Rhodes Boyson, under-secretary for higher education, any clearer about sources of finance for the expected boom in demand for retraining and other courses, despite the optimism expressed in the consultative paper, issued by the Department of Education and Science.

He said only: "I think over the next 10 years there are going to be considerable changes in the whole financing of higher education and it appears that people have to go for retraining after 15 or 20 years if it is a question of who pays for that. It is a new problem which may be solved. All I know is that we will need to let it be known that we can finance it."

Mr Stanley was subject to some hostile questioning after expressing doubts about the reaction of employers to Dip HE holders. Dr George Brown, director of North East London

Cut out the dead wood, says Boyson

by Peter David

Britain needs to ask whether it can continue to fund 45 universities doing world-league research, Dr Rhodes Boyson, the under-secretary for higher education, suggested this week.

Writing in *The Guardian*, Dr Boyson said that the Government was not against the universities, polytechnics or learning in general, but the funds available for higher education were going to be limited.

"It is vital that the present cuts are used not for equal clipping of all higher education institutions by nail scissors, but rather that the opportunity is taken for careful pruning as if by secateurs in our gardens where dead wood is cut down and new growth and future blooms are encouraged."

He said it had to be asked whether we already had too many universities and whether some of them would follow our soccer teams to become well below world standard.

"Can we continue to afford to properly equip 45 increasingly expensive

sets of laboratories and libraries at ever larger costs?" he asked. "Do we also need six times as many doctors with time for prolonged research as we had in 1939 or 1946?"

Citing the example of the Independent University College at Buckingham, Dr Boyson asked whether some universities ought to become simply teaching institutions, with able staff doing their research through sabbatical years in other research-funded institutions.

The polytechnics, too, needed to ask serious questions about their role. Did they need a member of staff for every 8.5 students? Should they do any non-vocational courses? Should they continue to recruit students nationally as well as locally?

Dr Boyson made no reference in his article to the leaked Government proposals to take polytechnics and colleges out of local authority control, but called for greater co-operation across

the binary line.

"It would seem to me that there is need of a national body on the main side, not only to oversee the sector but also to meet regularly with the University Grants Committee and possibly the Department of Education and Science to discuss future funding and courses."

Describing himself as a libertarian, Dr Boyson said that most attempts at post-war government planning had been unimpressive. He would be attracted by consumer control of higher education - with institutions "income centres of 'super academic learning' were safeguarded."

Warning against reacting to the recession by defending vested interests, Dr Boyson called on institutions themselves to provide answers to the questions he had posed.

He said: "We are in a new situation and the repetition of past mistakes is no substitute for radical rethought."

Clinical cuts will save £5m

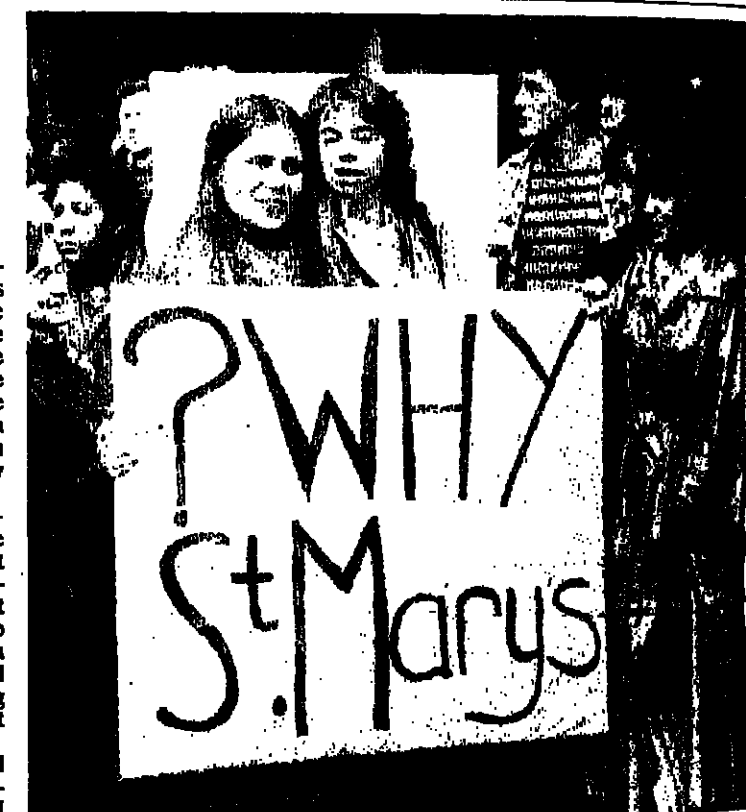
A major package of proposals, including plans to close two clinical schools and one pre-clinical school, were agreed by London University senate last week. The recommendations are intended to save about £5m of the university's £50m annual expenditure on medical education and establish a more robust consortia of schools which could survive future cuts in university funds.

The senate decided that the Westminster clinical school should merge with Charing Cross medical school at the Fulham site. There would be a reduction of clinical places for the joint school from the present intake of 210 to 180, although Westminster still hopes a gradual development of a joint school can be made and that some teaching will still be carried out at its present site.

Senate also agreed that a joint school be set up between St Mary's, Middlesex and University College hospital medical schools and that a committee be launched to investigate its likely structure. At present there are three pre-clinical and three clinical schools making up the proposed consortium and the university plan is for only two of each to remain, reducing combined clinical intakes from 325 to 270 and combined pre-clinical intakes from 310 to 240.

A serious disagreement is likely between St Mary's and the Middlesex over the likely structure of the consortium. St Mary's believes it should form one of the two major teaching centres inside the group along with University College, while Middlesex takes over as a postgraduate medical school. However, Middlesex wants St Mary's to have its pre-clinical teaching, axed and clinical teaching redistributed between all three medical schools.

At last week's meeting the senate also agreed that pre-clinical teaching at



Students and staff from St Mary's, one of the threatened medical schools picketed London University's Senate House where discussions on capital medical education were held.

St Bartholomew's and London Hospital medical school be combined and reduced from present intakes of 240 to 200. If financially feasible a new building which would receive capital backing from the University Grants Committee but not running costs - would be built for this purpose at Queen Mary College. If this proves impossible to arrange, pre-clinical could be carried out at St Bartholomew's Charterhouse site.

It was agreed to consolidate the Royal Free at its Hampstead site and to allow St George's to go ahead with its plan to complete building construction there, raising annual intakes to 150 students.

Guy's and St. Thomas's, at their own

suggestion, will form a united school with one dean and one council and the Institute of Dermatology will become a department there. It was also agreed by senate that King's College medical school be combined with King's College in The Strand - where pre-clinical teaching is carried out - and that the school become the faculty of clinical medicine at the college.

It is envisaged there will be a reduction in staff student ratios from 15 to 1:7 for students in clinical schools and from 1:7 to 1:10 at pre-clinical schools. As a result about 160 teaching posts could be lost, although the university hopes this will happen through natural wastage.

Minster defends diploma

The Diploma in Higher Education could provide an ideal base for specialist degrees which might need updating later in a graduate's career, Dr Boyson told the conference.

He said that the Dip HE would be defended by the Government if it did no more than attract hesitant students into higher education. There would always be a need to cater for those unwilling to commit themselves to a particular career of degree course.

"But the Dip HE would be especially useful as a general two-year grounding to be topped-up by specialization. Any updating could then concentrate only on the last year of a degree, using the knowledge acquired in the diploma as a theoretical base."

"It is a two-year course from which one can then set off in all kinds of directions for specialization," said Dr Boyson, adding that the diploma had

A better deal sought for gays

by David Jobbins

Educational materials presenting a factual and constructive attitude to homosexuality should be promoted in colleges, the annual conference of the college lecturers' union will be told next month.

A code of practice giving homosexual lecturers stronger legal protection against job discrimination will also be demanded.

Supporters of the motion to be discussed by delegates at the conference of the National Association of Teachers in Further and Higher Education want the code, covering union members involved with appointments, promotions and appeals procedures, to be submitted to the National Joint Council for adoption as part of lecturers' conditions of service.

The motion has been forwarded to the union's East Anglian region. The only dissent was over the original wording calling for a "positive" attitude, and the use of the word "gay" as a synonym for homosexual.

The debate will be the culmination of an increasingly intense campaign by the Natfhe Gay Group. Last autumn the group picketed a meeting of the union's national council when it was expected that the issue of preparing a policy statement on homosexuality would be discussed.

Mr Bob Cant, the group's spokesman, said: "In 1976-77 we were raising the issue in a general political way, building on interest arising from the gay movement."

"Now we are more firmly rooted in the trade union movement," he claimed that many younger homosexual lecturers were deciding against "coming out" for fear of the possible consequences for their career.

Dominating themes of the conference, in Bournemouth from May 23-25, will be education policy, job protection and education for peace. Delegates are certain to unite with the union leadership in attacking Government policies for the financing and control of further and higher education.

There will also be a firm demand for legislation to require local authorities to provide full and part-time education for people over school-leaving age, and in another move to protect adult education to prevent moves towards making the service self-financing.

Nuclear war will emerge as a major issue, with an executive motion seeking international efforts to promote peace and disarmament, a second opposing the Cruise and Trident missile programmes and a third simply seeking affiliation to the Campaign for Nuclear Disarmament.

SSRC charges 'scandalous'

Angry social scientists this week condemned the failure of the Social Science Research Council to consult them about plans to revise its committee structure. The proposals to abolish or merge at least half the SSRC's subject committees are detailed in a document circulated to council members only.

SSRC officials are now preparing a revised version which will be put to a meeting of the 15 committee chairmen next Friday. They are expected to react strongly to the handling of the affair by SSRC chairman Mr Michael Posner and acting secretary Mrs Kathy Cunningham.

The chairmen only heard about the proposals after copies of the document were leaked.

The options are: six new committees each covering a broad area of study; a modification of the structure through abolition of smaller committees and a process of amalgamation; or four administrative groups each containing two committees.

Professor Michael Drake whose economic and social history committee does a carve-up between the large economic committee and the rest said the proposals were "absolutely scandalous".

"Thinking of the diploma in terms of an entry qualification for one who will help in employment to achieve a career, it all seems as if we have very early stages, to have very little appeal. That tends, regrettably, to be the case with any new qualification," he said.

Coventry stands by to shrink

by Paul Flather

Coventry Polytechnic, which prides itself on a highly scientific profile and very low running costs, will reduce its size and student intake in 1983 if the Government continues to impose cuts.

Polytechnic governors have just agreed cuts totalling £800,000 (eight per cent) for 1981-82, with the library losing £125,000, and 22 academic and 58 non-academic posts frozen.

Mr Geoffrey Holroyde, the director, said the polytechnic was "brace to cope" this year but every frill was long gone. "We will see this year through but we cannot do it twice. We are living on what's in the cupboard from now," he said.

The Coventry (Lanchester) strategy assumes that the Government will introduce a system of unit cost funding for 1982-83. This would come out heavily in favour of the more econo-

mical polytechnics. In an internal paper, Mr Holroyde says Coventry's unit cost per student in 1980-81 was £500 below the average of the 15 polytechnics whose specialise most heavily in science, art and design, and technology.

The current funding system works against economical polytechnics, Mr Holroyde said, and was "quite monstrous". If local authorities did not contribute large sums from the rates to polytechnics, the system assumed polytechnics had not "under-bid" on costs.

Coventry education authority is supportive of the polytechnic, and has contributed £300,000. It backed a polytechnic delegation to meet Dr Rhodes Boyson, under secretary for higher education, to make a special case.

But governors have begun drawing

up plans to slim down the polytechnic. In his paper, Mr Holroyde says the student intake would have to be cut from 5,100 to 4,800 if another shortfall had to be met.

The current savings package takes £300,000 off the staffing budget, and £500,000 off books, teaching materials, travelling, and field courses.

Although staffing accounts for three quarters of the total polytechnic budget, compulsory redundancies have been avoided this year. National Association of Teachers in Further and Higher Education officers are however still unhappy about reductions in posts.

A Department of Education and Science sub-committee is currently looking at methods of unit cost funding system, and talks on possible mitigation for polytechnics particularly "hard done-by" at present, are also under way.

Three moves that would shake up universities

by Ngaio Crequer

Tenure for academic staff should be replaced, university charters should be reviewed and the Committee of Vice Chancellors and Principals abolished, according to the head of a London University school.

In a speech to the Conference of University Administrators, at Sheffield this week, Dr Bryan Thwaites, principal of Westfield College, criticised the view that universities should be coerced into change.

He suggested three positive moves. "The CVCP is manifestly useless as a pressure group, though it has considerable value as a luncheon club," he said. "The university system as a whole would probably benefit from the demise of the CVCP if that were to give the University Grants Committee a stronger sense of representing universities rather than conveying Government decisions."

Secondly, inter-university contact needed to be consciously strengthened and neighbouring universities should establish formal joint academic committees aimed at optimising resources.

Thirdly, "the concept of tenure has to be replaced by a more flexible system of academic employment. From a strictly academic point of view, let alone from the financial or legal, the rapidity with which intellectual disciplines are evolving and changing makes ridiculous the idea of appointing a 25-year-old to do more or less the same job for the next 40 years. So either tenure as such must go; or, alternatively, the idea of continuous retraining must be accepted."

He also said that universities' royal charters, as well as containing "devastating provisions entrenching academic tenure" endowed upon universities "that sense of immunity which clearly worries (the UGC)."

"I think it is incumbent on all of us - especially on senior administrators - to have another look at our charters and statutes, the latest versions of which were probably drawn up in the expansive 60s, to see whether their detailed provisions are still relevant to the coming 20 years or more," Dr Thwaites said.

The chairman of the conference, professor Robert Smith of Southampton University, said the vast majority of students who took engineering courses eventually became

professionals and the cost of introducing four year degrees for them would require an extra £12m of University Grants Committee funds which should be diverted from other subjects.

This relatively low cost could be achieved by having fewer students studying for longer. The engineering professors accepted this but stressed that careful calculations would have to be made before reducing numbers in smaller departments.

The professors expressed special concern about the possible closure of the engineering industry and construction industry training boards and also urged that industry must have close involvement in "setting the aims of the new courses and helping in providing teaching material and projects".

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Standards lower, says Beloff

Universities had played a part in lowering academic standards through their involvement in special engineering, Sir Max Beloff, former principal of University College at Buckingham, claimed in an Open University programme which forms part of a course on contemporary issues in education.

"Both the universities of Oxford and Cambridge, for instance, tried very hard to increase the number of people from the state sector," said Sir Max. "This was quite right but they achieved it by lowering standards of admission, not by encouraging state schools to improve their own standards."

The programme *Standards Debate* which was televised in two parts at the Royal Institution last week and will be broadcast this summer was based on the motion that "academic standards have been sacrificed on the altar of equality". It was proposed by Mr Kenneth Minogue, of the London

School of Economics and opposed by Professor A. H. Halsey of Nuffield College, Oxford. Sir Max was one of six witnesses called for and against the motion.

Under Professor Halsey's cross-examination, Sir Max said that the only reason why there were more people in secondary and higher education was because there was now a larger population. He did not accept Professor Halsey's figures that the number who obtained degrees since Sir Max's days had quadrupled and the number obtaining A levels risen from seven to 47 per cent as proof that standards were higher.

Sir Max denied that standards at Oxford University were better than when he was there. When he entered the university he was expected to know one ancient and two modern languages, now this was not required of any candidate.

The threat to adult education

by Peter David

The Government must tell local education authorities that unless they provide reasonable opportunities and resources for adult education they are failing to comply with the requirements of the 1944 Education Act.

This is one of the main recommendations in a report on the future of adult education published yesterday by the Advisory Council for Adult and Continuing Education.

In the report, the first of a series planned by the council, Dr Richard Hoggart, its chairman, says he is sad that after more than a century of publicly provided education it is still necessary to argue the case for a reasonable proportion of public funds.

That proportion now seems to have fallen to below a half of one per cent of the national education budget," he says. "This is not reasonable. Of course I acknowledge that central and local government are extraordinarily hard pressed to maintain their public services and that consequently harsh financial decisions have to be made, often after long and anxious deliberation."

"The point 1, and my colleagues, would stress is that as a public service, adult education has always been slenderly financed and even small cuts must have disproportionately large effects on it."

The report, *Protecting the Future for Adult Education*, recalls several Government statements noting the importance of adult education and promising that it would not be required to make disproportionate economies.

It alleges that these ministerial statements have not apparently been communicated effectively to local authorities and were not consistent with many local authority funding decisions.

Local authorities operate most confidently within a clearly defined statutory framework, and the relevant section of the 1944 Act is not sufficiently specific, the report says.

"Until the section can be amended - and the council is examining possible forms of amendment as part of its inquiry into development strategies for continuing education - it needs to be backed by much clearer guidance at national level."

"The Secretary of State should inform local authorities that unless they provide reasonable opportunities for adult education and the financial support and other resources which these require, they are failing to comply with requirements of the Act."

The report also says that the Government should consider the possibility of a new centre for research into adult education and the financial support and other resources which these require, they are failing to comply with requirements of the Act."

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Overseas news

Drive to improve intake

from James Hutchinson

BONN West Germany is to be more selective in admitting foreign students. The aim is not necessarily to reduce the number of students from abroad, which has remained fairly steady at about 60,000 for several years, but rather to improve the quality of the intake.

The education ministers of the Länder—the states have a large measure of autonomy in educational matters—claim that in comparison with other industrial countries Germany pursues a liberal policy towards the entry of foreigners, and provides favourable conditions for foreign students.

Thus foreign undergraduates are put on the same footing as Germans and not charged tuition fees. And a reasonable proportion of university places is set aside for foreigners wishing to take subjects affected by the *numerus clausus* (restricted entry). The education ministers say that in principle they intend to continue this policy.

However, an exceptional influx of applicants from Greece, Turkey, Iran and Indonesia made it necessary to introduce new regulations. The universities, say the ministers, were faced with problems which they could not solve by themselves, problems which were aggravated by cuts in the budget for higher education.

"Two thirds of the applicants from these countries," says the Conference of Education Ministers, "have a totally inadequate knowledge of the German language, and many have no financial support. This jeopardises their chances of success, and has created a situation which cannot be in their best interests."

So the following new regulations have been adopted:

- Residence permits must be obtained at German consulates abroad before entry, and such permits will be issued only if the applicants can show they have been granted a place at a German university.

- Tourist visas may not be in future be exchanged for residence permits.
- There will be closer scrutiny of applicants' academic qualifications, and an appropriate knowledge of German will be demanded.

A spokesman for the Ministers' Conference said that in Turkey, for instance, about 500,000 people completed secondary education each year, but only about 70,000 of them subsequently obtained a Turkish university entrance qualification. "We shall insist that Turkish applicants to study here have at least the qualifications required to obtain a university place at home," he said.

Many young foreigners are arriving in Germany on tourist visas and with hardly any money. Like many applicants for political asylum, their principal object is to escape poverty. In the winter term the total student population in Germany was just over a million, which is six per cent more than a year ago.

Report ignores demands for grant increases

from Geoff Maslen

MELBOURNE

Academic howls of protest greeted the tabling in parliament of the Australian Education Commission's report for the 1982-84 triennium. The commission has the responsibility for overseeing Australia's tripartite tertiary sector and making recommendations on how it should be financed. It is advised by three separate councils representing universities, colleges of advanced education and a host of small technical and further education colleges.

Although each of the councils argued for moderate increases in grants to their own institutions, their pleas went largely unheeded by the TEC. Both the Universities Council and the Advanced Education Council called for an extra million dollars for their institutions over the next three years—equal to a five per cent and a seven per cent increase respectively.

The TEC, however, slashed the proposed 78 million dollars back to 48 million, about a three per cent increase. The Council for Technical and Further Education suggested a 38 million dollar or 17 per cent increase spread over the next three years. It will now get a 13 per cent or 23 million rise, if the government accepts the TEC's advice.

The TEC report reveals that although student numbers in universities and in advanced education have increased since 1975, their rate of growth has declined significantly. The TEC says these changes have occurred after a long period of strong growth in higher education. On the other hand, enrolments in the technical and further education area have grown steadily.

Between 1974 and 1988, there was an absolute decline of about 13 per cent in the number of young people going to school to universities in Australia. The direct entry to higher education of school leavers declined from 18 per cent of the age group in 1974 to 14.5 per cent in 1988.

This one fifth decline represents a rapid substantial reversal of the trend towards participation of the young in higher education which had been the case for 28 years. The TEC maintains that total expenditure on tertiary education over the past six years has been more or less constant in real terms, although building programmes in universities and CAE have shown a

marked decline. This has been offset by increases in recurrent expenditure for tertiary education as a whole and a doubling of the building effort in technical and further education.

The commission's report drew attention to the marked shift in the balance of enrolments from tertiary education to the technologies and business studies. It says the number of students in the technologies and business studies has increased by 50 per cent since 1975. The commission argues that the development in CAE of any real research function, although it seems to be an "individual members of CAE academic staff who have the appropriate expertise being encouraged to undertake tactical problem-oriented research." It states that the commission is not willing to recommend special funds for research in advanced education.

Technical and further education—neglected area of higher education in Australia—comes out best in the TEC report. The commission agrees the TAFE sector should get more money for staff development grants, for particular purpose recurrent grant to support curriculum research and development and a new provision to help TAFE keep pace with the changes in equipment used in industry. But from the cries of despair of academics in the three sectors a seemed no one was happy.

One of those responding bitterly to the TEC report was the president of the Federation of Australian University Staff Associations, Dr Peter Danell. He said if the trend in university funding was not reversed it would be hard to maintain enthusiasm among academics. The Federation of Colleges Academics described the report as "second-rate work, inadequate in scope, respect and which simply told the government what it wanted to hear."

The federation's general secretary, Mr Ross Homes, said the commission had rejected the expert advice of the Advanced Education Council, particularly in regard to the provision of limited funds for applied research in the development of award courses at post-graduate level and in the financing of non-award courses. The association representing staff in the TAFE area also attacked the commission's recommendations.

North American news

Businessmen predict free enterprise boom

from Clive Cookson

WASHINGTON One of the few causes for which universities are finding it relatively easy to raise money these days is free enterprise. Companies are delighted to finance a new professorship or research institute with private enterprise in its title.

Members of the three-year-old Association of Private Enterprise Education (APEE) are so encouraged by the hospitable economic and political climate that they decided at their annual meeting last month to set up a permanent office with a full-time executive director. At present about 40 academic centres and chairs of free enterprise are involved in the association, whose aims include improved communications between educators and the business community, and the advancement of teaching and research on the American economic system.

One function of the new APEE office will be to put universities and colleges seeking to establish private enterprise institutes in touch with corporations that want to fund them. Professor Gene Uselson, Director of the Centre for Education and Research in Free Enterprise at Texas A and M University, says members of the association expect to see a boom in the establishment of these chairs and centres.

The idea is not new. A few companies were donating money to promote education and research in free market economics back in the 1960s. Then, as now, their motive was to counter what corporate America saw as leftist anti-business bias in academe—particularly among economists.

Dr Uselson, a professor of finance, serves on the board of consultants

believes there is some truth in their suspicions. "Most of the economists I know are very liberal," he said. "There are very few top-flight economists who have given much attention to the free market and how it works."

The movement gathered momentum slowly, until former Treasury secretary William Simon gave it a boost about five years ago with a well publicized speech. Mr Simon attacked universities for constantly criticizing capitalism and asked whether the "largesse of the free enterprise system" should continue to "finance its own destruction." He advised corporations and businessmen to direct their educational gifts to institutions friendly to business.

The growth of free enterprise education accelerated after Mr Simon's speech. Now President Reagan's election and the new self-confidence of American business promise further gains.

Professor Uselson predicts that the trend of the 1980s will be for wealthy individuals and businesses to avoid giving universities "huge endowments over which they lose control, and instead to give support for specific purposes on an annual basis and see if they like what's done with it."

By no means all the academic units that belong to the association of private enterprise education have "private enterprise" or a similar phrase in their titles. Professor Uselson wishes his centre at Texas A and M had escaped that label, because, he says, some academics regard anything called a free enterprise institute as tainted by business and automatically biased.

But the wealthy businessmen who serve on the board of consultants



Mr William Simon attacked universities.

insisted that it be the centre for education and research in free enterprise. "I personally think it's a bad name and it would have been good to call it something else," Professor Uselson said. He agreed that the title made it easier to attract funds from corporations.

The Association of Private Enterprise Education "tries as an organization to avoid being labelled ideologically," says Professor Charles Myers of Vanderbilt University's Peabody Centre for Economics and Social Studies Education, whose term as APEE president has just finished. He agrees that "a majority of people (associated with APEE) would classify themselves as conservatives" but identifies himself as one of the liberal minority.

As if to show the ideological diversity of the APEE, Professor Myers has handed on the presidency of the association to Professor Frank Chew, associate director of the Centre for the Study of Private Enterprise at the University of Southern California. The latter is directed by Professor Paul Laffer, the brightest young star of tax-lashing supply-side economics, and—unlike most such centres—it sets out frankly to promote political activism by and on behalf of business.

The activities of free enterprise centres differ as much as their professors' political beliefs. Some, like the University of Texas's Institute for Constructive Capitalism, are basically think tanks; some concentrate on teaching undergraduates about private enterprise; and other focus on economics education in schools, through teaching training.

Professor Uselson says his centre was set up three years ago to help secondary schools in Texas comply with a new state law mandating the teaching on economics. (Altogether 19 states have such legislation.) Although he is expanding its research activities and making it more of a think tank, the centre still devotes much attention to conferences and inservice training for Texan schoolteachers.

The centre also runs a group called Student Advocates of Free Enterprise. It consists of a small number of very bright students who speak to clubs and community groups "about the free market, how capitalism works and why it works."

British firm sponsors degree

by our north American editor

A British company is the major source of start-up funds for a new masters degree programme at the Massachusetts Institute of Technology.

Pilkington Brothers, the Lancashire glass-making company, has given MIT \$100,000 to support a programme in the management of technology—the first in the United States. A smaller corporate contribution, \$150,000 (about £66,000), has come from the American firm of Gillette.

The British company, which is led by members of the family that founded it in the early nineteenth century, was closely involved with MIT officials in planning the degree, according to programme manager Jane Morse. "Sir Alastair Pilkington has been very enthusiastic about it from the very beginning," she said.

Pilkington has had research links with MIT for several years, and the company has been a member of the university's industrial liaison group since 1976.

MIT's schools of engineering and management will conduct the programme together—their first joint venture. It is an intensive 12-month programme, designed for engineers and scientists who have been working in industry for five or ten years, and who want to undertake more managerial responsibilities on the technical side of their organizations.

The curriculum covers three broad areas: core subjects in general management principles and analytical methods; management of scientific and technical programmes and organizations; and a research thesis. "While programmes at other universities do combine engineering and management studies, the MIT programme is the first to focus upon managing technological innovation itself, with emphasis upon realizing new and improved products and manufacturing processes," said management professor Edward Roberts, who will direct the new programme.

Enrolment will be limited to ten during the first and second years, to allow for development and experimentation with the curriculum, most of which is brand new. Then the intake will be raised to 40 or 50 a year.

The tuition fee for the first year, starting in June, is \$14,400 (and students must allow at least another \$5,000 for living expenses). The price sounds so high, Ms Morse said, because it is an accelerated programme in which the two academic years normally required for a masters degree are rolled into one calendar year. Nevertheless the programme will not cover its costs until it is operating at full size from 1983—which is why Pilkington's and Gillette's financial support was needed.

MIT president Paul Gray called the programme an effort to serve the increasing needs of US industry for technological leadership, and Ms Morse said not more than 30 per cent of its students were expected to come from abroad.

One foreigner has already been admitted for the inaugural year. He was selected by Pilkington, after a company-wide competition. MIT officials hope the British company will nominate someone for the programme every year. Pilkington candidates will have to go through the same admissions procedure as other applicants, but, as Ms Morse said, it would be "highly embarrassing" if one were rejected.

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No cheers for Dr. Pais' 'rabbits'

from Lionel Cohen

THE HAGUE

With a general election in less than three months and an education budget already savagely trimmed, education minister Dr Arie Pais has chosen this moment to unveil a new study-financing plan that has simultaneously evoked howls of anguish from student leaders and sneers of derision from political opponents.

Like a conjuror, Dr Pais has produced his white rabbit of a plan for wholesale changes in the existing system of grants and loans out of a budgetary hat that contains not a cent more to be paid out to the students. The principal attraction lies in the prospect of grant recipients being freed of financial dependence upon their parents income. The present system of study finance, which consists partly of a grant and partly of an interest-free loan, is calculated either according to parents' means or, in accordance with the age or marginal income of the student. Students over 27 years of age, for example, get no grant for the first two years—only an interest-free loan—and in practice only about forty per cent of Dutch university students receive the full payment of some £1,600

per year grant plus about £150 per year loan.

Under the new proposal, the Government's interest-free loan element would be entirely abolished and a new "basic-grant" payment would be introduced to replace the present element but without being dependent upon what a student's parents happen to earn. This basic grant, however, would be much lower than the present grant provisioned by students securing a Bank loan at market rates of interest. Only young students, probably limited to the under-21s, who also could show that their parents' income was below a certain level, would receive a Government "interest-subsidy", while all students would be subject to severe reductions in their basic grant if their study results were not satisfactory. A 50 per cent grant cut in the year following unsatisfactory exam results has been proposed.

On present showing, it seems extremely unlikely that this plan will ever reach the Statute Book in this form. Quite apart from coming election pressures, the whole question of study financing has been a subject of argument amongst and between the political parties for more than a decade. The

present complex rules for student grants date back principally to 1953 legislation, but they have since been subject to a variety of modifications as well as an annual review of the amounts involved in line with changes in the cost of living and the costs of study.

In addition a series of reports on changes in the present system—the most recent of which dates back to 1974—have been examined by a standing parliamentary committee on this subject, whose last report in 1977 was also to have been the basis of proposals by the former Labour Government. These proposals were shelved following the defeat of Labour Prime Minister Joop den Uyl in that year and the fall of his Cabinet, and the Committee concerned met for the last time in 1978.

Now it is likely that the Parliamentary Committee on Study Financing will be recalled in the near future. In a recent interview, the Labour Party chairman of the committee, David van Ooyen, made clear that he, himself, regarded this latest reform proposal as laughable and certainly not serious enough to warrant calling a committee meeting at this stage. But whether he will be of the same opinion after the May elections still remains to be seen.

New structure favours young scholars

The Soviet Union appears to be planning to restructure its higher education system to allow scholars to obtain a doctorate while still in their twenties. At present research students work only for the degree of Candidate, which, although equivalent to a PhD elsewhere does not carry the title of doctor—nor the salary bonuses of 100 roubles (£60) a month which goes with it. Only after a further 10 or 20 years of research does the "Candidate" submit a doctoral thesis, which, if successfully defended, brings him the coveted status.

This system is a survival of the 1930s, when Soviet science was undergoing rapid expansion and modernization to meet the new demands of the economy. At that time it was necessary for large numbers of young scholars to go out into industrial research before completing their doctorates. The degree of Candidate (and, indeed, the title) seems to have come from the *ad hoc* need for some kind of screening before these young people proceeded to their jobs.

Now, however, the two-fold degree system has little to commend it. Not only does it double the examination and supervision load of senior academics, it can also tie up the creativity of researchers for an average of 15 years. For, once embarked on a topic which it is hoped will lead to a doctor's degree, few scholars will readily abandon it for another line of research.

Union angered by summons

from Benny Morris

JERUSALEM A serious clash between Israel's Hebrew University and its student union developed last week after union chairman Yisrael Katz refused a summons to appear at a pre-trial hearing before the university disciplinary board. Katz threatened to shut down the university if the administration stood by its decision to try him.

The Dean, Professor Iina Ben-Dor, had lodged a complaint against the student leader and asked for his temporary suspension until the trial, expected in a fortnight's time—following an attempt by Katz and about 20 of his followers to lock the Rector, Professor Rafael Mechoulam, in his offices on the Mount Scopus campus.

Katz reportedly refused to appear before the board or to discuss the matter with the academic secretary or the dean, and, depending to meet university President Abraham Harkush. In a telephone conversation with the academic secretary's personal assistant, Katz said he would call a student strike if the university continued the proceedings against him.

Professor Mechoulam said: "No one is above the law. We aren't seeking a confrontation with the union, but the complaint against Katz stands."

The incident was sparked by the university's announced intention to extend classes by one week into the coming Passover vacation to make up for time lost by the two-week lecture strike earlier this month.

Inquiry planned over disrupted speech

from Craig Charney

JOHANNESBURG A furious row has broken out at Johannesburg's University of the Witwatersrand following the disruption by students of a speech there by Minister Piet Koornhof.

University vice chancellor Dr D. J. Du Plessis has announced an official university inquiry into the noisy protest, which prevented Dr Koornhof, the minister of "co-operation and development" (or black affairs) from delivering his prepared speech.

A petition is being circulated by right-wing students demanding the resignation of the president of the Students' Representative Council, Mr Sennyi Adelman, who helped organize the protest. Although they have been widely criticized, the students have also received influential support on and off campus.

The controversy underlines the dilemma confronting a liberal university in the polarized atmosphere of South Africa. How far can the university tolerate protest against an oppressive regime without losing its liberal character?

"We reject intolerance and believe freedom of expression is central to our concept of academic freedom," Professor P. Nyoni, the deputy vice-chancellor, said.

"We therefore believe that a person should be allowed to make his point before being criticised. This applies not only to persons of opposing opinions, but also to political movements."

It would not have been inappropriate for Dr Koornhof to have been heckled, but he should not have been denied the opportunity to make his point "as that is a denial of the freedom we preach," said Professor Tyson.

Mr Adelman, the students' leader, strongly disagreed. He put out a statement saying: "It is specifically because of a belief in freedom of speech that the reaction to Dr Koornhof occurred. It is unreasonable to demand freedom of speech for a man whose policies have resulted in the systematic denial of far more fundamental democratic rights such as food, shelter, and education to millions of South Africans."

"When Nelson Mandela, Walter Sisulu, and Toivo Ja Toivo are allowed to exercise their democratic rights to speak on Wits campus we will allow Koornhof to speak there as well."

Mr Adelman has been particularly angered by the inquiry, with which he has "refused" to co-operate. "When Helen Joseph, a 74-year-old woman, and Bishop Tutu were assaulted by right-wingers on campus last year, there was no official inquiry by the university," his statement said.

Mrs Helen Suzman, human rights campaigner and progressive party MP, condemned the disruption of the meeting, which had been jointly organised by campus progressives and the pro-apartheid Students Moderate Alliance as part of a forum on the forthcoming white-only election.

Calcutta opposes Mrs. Gandhi

from A. S. Abraham

BOMBAY The Marxist government of West Bengal is demanding that education revert from federal to provincial control. It is a demand that is causing political as well as academic reaction.

Until Mrs Gandhi's Emergency rule from 1975 to 1977, education was included in the list of provincial powers. During the Emergency, part of her effort to centralise authority in all fields, Mrs Gandhi amended the Constitution to transfer education to the Concurrent List. This allows the government in New Delhi to legislate in education, but gives the federal government the power to legislate in education. It is not compatible with the federal system.

The West Bengal government's present education and language policies are provoking fierce controversy inside and outside the state. Some of these policies have been opposed to Mrs Gandhi to use New Delhi's Concurrent powers to bring the state government to heel. The latter is convinced that Mrs Gandhi's policies in the state, with her blessing, are even larger ambitions: it believes they are instigating trouble over local educational policy to build a case for invoking constitutional powers vested in New Delhi to topple the Marxist administration and put West Bengal under direct federal control.

Calcutta's response seems to be

Gene expert pays the penalty

The National Institutes of Health are paying the Dr Ian Kennedy for cloning a dangerous virus at the University of California, San Diego, last year in contravention of the federal guidelines on recombinant DNA research. An Institutes' investigation found that Dr Kennedy, who resigned from the university in the autumn, failed to follow responsible scientific procedures.

A copy of the report will be attached to any grant application Dr Kennedy makes in the next two years—reducing his chances of winning an award—and if he does get a grant for DNA research it may be subject to special conditions.

Dr Martin Cline has resigned as chief of the division of hematology and oncology at the University of California, Los Angeles, following criticism of his controversial attempt last year to treat thalassemia, a hereditary blood disease, in two women by genetic engineering. It was the first reported treatment of humans by gene splicing.

Although the work was done in hospitals in Italy and Israel, UCLA officials felt Dr Cline should first have got approval from the university's committee on the use of human subjects.

Schoolboys unravel college examiners' blunders

Sharp-witted candidates have caught embarrassing blunders in two college entrance examinations set by the educational testing service. Both errors were discovered as a result of a new ETS policy—dictated by public pressure and so-called truth-in-testing legislation—to publish some of its Scholastic Aptitude Test papers after the exams.

The first mistake was spotted by a 17-year-old Florida schoolboy, Daniel Lowen, who took the Preliminary Scholastic Aptitude Test (PSAT) with 830,000 other candidates last autumn. The PSAT consists mainly of recycled questions from old SAT papers, and it is used both as a warm-up exam for the SAT itself and as a qualifying test for the National Merit Scholarship programme.

When Daniel got back his answers and a copy of the multiple-choice test, he was sure he had in fact found the right answer to one of the 50 questions. He was marked wrong. He got his answer, an engineer on the SAT, decided not to go back and remark old scholastic aptitude tests

Space Shuttle, to confirm mathematically that he was in fact correct, and Mr Lowen soon convinced ETS.

The problem involves geometry and is difficult to describe without the diagram in the test paper. Two pyramids are placed together and the question is how many faces are exposed in the resulting solid. ETS said the answer was seven—the unanimous opinion of the panel of university mathematicians who reviewed the paper—but Daniel showed that the correct solution was five, because two pairs of faces merged together into single planes.

The testing service had to upgrade the scores of 250,000 other candidates who answered five—probably for the wrong reason—but it decided not to mark down those who put seven (which looks correct superficially). Correcting the mistake costs ETS an estimated \$110,000 in postal and other expenses. However the college board, which administers the SAT, decided not to go back and remark old scholastic aptitude tests

that included the offending question. This was the first PSAT for which ETS disclosed the questions and answers, in response to criticism of its alleged secretiveness. A spokesman for the service agreed that the disclosure policy brought its error to light but estimated that such mistakes occurred no more than perhaps half a dozen times a decade.

Then, a week later, the testing service had to admit to a second mistake, this time on the mathematical section of the SAT itself. A 17-year-old from New York—the only state where the law requires test disclosure and where the college board provides SAT candidates with questions and answers—discovered that a multiple-choice question had two correct answers.

The disputed question asked students to choose the row of numbers (from a list of five rows) which "contains both the square of an integer and the cube of a different integer". ETS said the correct answer was a row containing 8 (the cube of 2) and

9 (the square of 3). But the New York student spotted that a second row, containing (the square of minus 3) and 8 (the cube of 2), was also right. Apparently the testing officials had forgotten about negative numbers.

About a quarter of the 87,000 New Yorkers who took the SAT in October will now have their scores raised. The error will not affect candidates in other states; they were given a different version of the test, which was not made public.

Spokesmen for the college board and ETS said they would revise their procedures as a result of the errors, but there was no indication whether they are considering making all SAT papers public nationwide. They have opposed such a policy in the past, arguing that the existence of the test would go up if an entirely fresh paper had to be prepared each time, and that ETS needs to re-use some questions in order to keep standards constant from year to year.



Dr Ingram is ready to defend his institution against the recession

A champion of conciliation

Not long ago the second generation of vice chancellors taking over the new universities could look forward to comfortable futures. With the traumas of birth and infancy behind them, the universities which sprang up in the Robbins years appeared to stand on the threshold of a period of consolidation and gentle expansion.

In recent years, and especially since the last expenditure White Paper, all that has changed. Even the most sanguine of vice chancellors are now settling down to a future of hard battling to defend their existing gains and ward off a University Grants Committee determined to restructure the system for leaner times.

In Dr David Ingram, who became its vice chancellor six months ago, the University of Kent is lucky to have acquired a vice chancellor who has already had to prove his mettle as a skilful and effective political fighter. Dr Ingram arrived at Kent immediately after clinching a deal to acquire the Marjorie site in London for Chelsea College. Its acquisition was regarded as essential for the survival of the college, and as its principal Dr Ingram had to defeat powerful competition from business interests.

His victory there gained him a reputation as a dogged champion of his own institution, but Dr Ingram's personal style is anything but bullish: he is a fluent but understated vice chancellor, a conciliator rather than a visionary.

In this Dr Ingram's manner and aspirations are very different from those of his predecessor, Geoffrey Templeman, who had an almost Renaissance vision of Kent as a community of scholars. Dr Templeman brought many of the traditions of Oxbridge, including a fully fledged collegiate structure, to the raw hilltop campus overlooking Canterbury. He hoped to marry them to the interdisciplinary ethos of a new university.

Now it falls to Dr Ingram to defend Dr Templeman's creation in a very different atmosphere of recession and stagnation. He is very frank about the difficulties - Kent's expansion was halted prematurely leaving an incomplete range of science faculties - but believes that the university will be able to energize and renew itself without massive growth.

Dr David Ingram has proved his skill as a political fighter, a useful qualification for his new job as vice chancellor of Kent. PETER DAVID has been talking to him.

"Our problems arise from the fact that we have been caught in the middle of a planned expansion which has not been completed. For instance, we do not have any geology or earth sciences which could have complemented the other faculties.

"We now have to take what we have and alter slightly the structure of the total academic spectrum so that our courses fit in more coherently. We can probably do this by realizing the need for much more coordination across the faculties," he says.

The sort of thing Dr Ingram has in mind is to bring together faculties which have very loose relationships, and help them collaborate in producing new courses. At Chelsea, for example, Dr Ingram was instrumental in persuading the social scientists and medical scientists to devise a degree course in nursing studies.

At Kent, too, there are strong social science and biological science faculties which might be persuaded to mount combined courses in the interdisciplinary field, which is becoming increasingly popular.

Developments like these across faculties could help Kent to remain vital and innovative despite the withering of resources. But Dr Ingram is also determined to solve the strategic problems of the university, bringing it into a more central place in the life of the county and building on its research base.

As the only university in Kent, a county without a polytechnic, Dr Ingram believes the university has a special responsibility to meet the potential demand from native students living between the commuter belt and the coast. The university is trying to establish outposts in the

county's adult education centres, and collaborate with the neighbouring local colleges, Christ Church and Nonington.

Most of Dr Ingram's academic career has been in research, and he is determined to protect and expand research at the university. He says he has been impressed by the quality of research in the humanities, English, law, electronics and space research.

He points to the fact that the Science Research Council awarded Kent one of its first four grants under a new scheme to release senior academics for research. And Kent has also received a special grant from the University Grants Committee to set up a commercial company to aid collaboration between industry and the university's science research.

Dr Ingram himself read physics at New College, Oxford, and after working at the Clarendon Laboratory moved to Southampton to spend the 1950s setting up a unit on microwave spectroscopy. He cannot help communicating tremendous enthusiasm for research and its ethos.

"At Oxford we were taking the wartime research on radar and using it to probe into the structure of atoms and molecules," he recalls. "It was as though we were handling a completely new technique on a plate. We could roam around and practically everything we did was new. It was a wonderful opportunity to cream off the subject, and leave others to follow behind."

Many people believe that that kind of excitement has passed out of higher education forever. But Dr Ingram believes that if the universities explain themselves better to the nation they can attract a growing proportion of private funds which will enable some growth to take place.

The Robbins expansion was too rapid, and it gave us an artificial age structure of staff. On the other hand, I think the future of every advanced country is going to depend more and more on having better trained and qualified people. We are moving into an age when it is mind more than muscle which counts. It would be ridiculous not to make the most use of

John O'Leary spares a thought for the colleges left out of the national body

Why being small is not so beautiful

There may be those who fear the heat of a national body kitchen, but spare a thought for those left out in the cold. While the polytechnics and the local authorities debate the consequences of central control, a number of colleges left to contemplate life in the rump of public sector higher education.

They are those of the colleges of higher education which do not meet the criteria laid down in the proposals for a national body proposed by the Department of Education and Science. Having no initial teacher training and less than 70 per cent of advanced work overall, the colleges are left in limbo with no idea what the future holds.

Altogether, the DES lists 285 institutions with some poleable work which would remain under local authority control, though the leaked document gives no hint of detailed funding arrangements for their advanced courses. However, 205 of these have less than 10 per cent higher education and a further 53 less than 30 per cent, so most could be presumed to prefer to remain outside any new body because of their emphasis on non-advanced work.

It is those 27 remaining colleges and institutes which now feel themselves under the greatest pressure. They have more than 10,000 students on advanced courses and many have their roots firmly in higher education, having settled for a relatively low proportion of advanced work as a deliberate policy.

Some, indeed have considerably greater numbers of higher education students than the smaller colleges proposed for inclusion under the national body by virtue of their teacher education courses. At the extremes, Charlotte Mason College of Education, at Ambleside, would qualify with only 300 students, whereas Cambridgeshire College of Arts and Technology, with 650 full time students on advanced courses, would not.

Many of the principles in the borderline colleges are residual at the flexible criteria proposed for adoption by the DES. They ask why no credit is given for volume of higher level work, no consideration made or regional provision or for relevance to the local or national needs of industry, and fear for the survival of the "seamless robe" of education which they have tried to promote.

Cambridgeshire is perhaps the classic example and must be a candidate for the one place reserved in the original proposal for a college with less than 70 per cent advanced work.

With almost 2,000 full time students and 6,000 part timers, it is one of the larger colleges and one well respected both in educational and local industrial circles. Because of a mixture of historical accident and a genuine commitment to the notion of the "seamless robe", it offers an unusually wide range of courses, from A levels to degrees, with the result that advanced courses account for only some 40 per cent of total work.

The principal, Mr Roy Helmore, a member of the Manpower Services Commission and a leading light in both college principals' associations, is apprehensive about conditions outside a national body: despite a good relationship with his local authority. Exclusion would leave East Anglia bereft of coverage inside the body as proposed by the DES, with the exception of the mono-technic teacher training college of Homerton, he points out.

Abandoning non-advanced courses to get up the required 70 per cent "seamless robe" is not an option because, as a matter of policy, the college has tried to ensure that staff teach courses at a variety of levels. In any case, the lower level work is a valued part of local provision and would not be voluntarily relinquished.

"I like to think that the regional argument will have to be recognised by the DES," says Mr Helmore. "The trouble is that the larger institutions tend to be where industry was, rather than where it is going to be in the future. Cambridgeshire is one of the fastest growing areas of the country, with the expansion of Stansted Airport likely to affect the position even more, yet this is ignored."

Mr Helmore's complaints are echoed by Dr Kenneth Swinhoe, principal of Slough College of Higher Education, which has also tried to adapt to the needs of microelectronics and other modern industries. Although the college has only 52 per cent advanced work, Dr Swinhoe says its vocational orientation and emphasis on higher technician training are precisely what ministers have advocated for public sector institutions.

"We are trying to keep our heads until we get some clear idea of what is being proposed," he said. "It could well be that the best future would be outside the 'magic circle', since highly supportive local authorities might make a better job of it, but I am not convinced."

"Our authority has come to understand our role in recent years and has been supportive, but it would be a big strain on them. As the proposal stands, it puts in great jeopardy the kind of thing we are doing, which seems to us entirely in line with what this government or any alternative would be propounding."



At nearby Buckinghamshire College, however, staff are not so sure that they want to leave the bosom of a supportive local authority even if the criteria allowed them into a national body. Although the college has only 50 per cent AFE, it has several unique courses, notably in timber technology and furniture production, and sharing exchange schemes with a number of continental institutions.

Like his colleagues, the principal, Mr Desmond Everett, would not wish to alter the balance of courses and is critical of the criteria suggested by the DES. On balance, however, he would rather take his chance outside any new arrangements.

Mr Everett is hopeful that there will be a substantial rethink before the DES plan is enacted, partly because of the effect on the Technical and Business Education Councils of any scheme which did not safeguard advanced courses outside the DES more than half of all BEE and TEC courses to be in other colleges.

"As things stand, we would not qualify even though we are the only college of advanced further education in Buckinghamshire and serve two major industries nationally," he says. "But we have thrived while others have shrivelled, and provided there are safeguards, I would be happy to remain with our authority."

The three colleges' dilemmas are typical of those to be found throughout the borderline group, no one knowing what the alternative to central funding is to be and most remaining provision tinker with the balance of provision. Many of the principals believe that there will be a rethink of the criteria which could enable their institutions to qualify. But then what will happen to non-advanced work?

Most favour the local authorities, plans, if only as the best hope of greater flexibility. If the original DES plan should go through, however, it will leave a legacy of bitterness in the group and could virtually end any prospect of a seamless robe of provision through all levels of the education system.

Robin McKie talks to the second subject in a series on people who have popularised science

Desmond Morris - the bare facts

To those who score the academic turned media star, Desmond Morris has the perfect reply - a massive Oxford villa with heated swimming pool, games room, studios and a 5,000-volume library.

Cynics may regard these trinkets as the veritable wages of sin. Morris, famed for his books *The Naked Ape* and *The Human Zoo* and his TV appearances, merely sees them as expensive toys to be dropped the moment a new project enters sight - such as one vague plan to buy an Indian Ocean island where he could study "every blade of grass and insect", using his observations to write the ultimate micro-ecological text-book. One suspects he would still turn the results into a best seller.

In many ways the solitude of a desert island would be a fitting home for a scientist who grew up from being "an only child, introverted and shy" and who spent much of his time roaming the Wiltshire countryside "just watching - a stream, a forest, an animal, anything". The result was a person "intensely visual and responsive to patterns and shapes".

This in turn pointed the young Morris in two different directions. Firstly, to a lucrative career as a zoologist and science populariser and secondly to a passionate interest in the arts.

This has produced many oscillations in Morris's career, such as in 1956 when he moved from Curator of Mammals at London Zoo to the directorship of the Institute of Contemporary Arts. He has also sold several of his own surrealist paintings, some for more than £100.

However, several crucial and decisive turning points had to be reached along this road. The first was the discovery of the ancient brass microscope of his great grandfather William Morris who seems to have shared many common features with his great-grandson - book hoarding, natural history and writing. (William Morris founded the Swindon Advertiser, the first penny paper in Britain.)

This ancestral magnetism revealed a whole new world to Morris and with further encouragement from his board-school biology teacher, appropriately nicknamed Buttercup, he launched himself into zoology through a series of intensive nature studies and field trips.

Later adolescence brought on exuberance and rebellion and as one odd consequence, Morris turned to modern European art - which most people at that time thought quite quaint. Morris began painting and later, while serving his National Service in the post-war forces, lectured in the arts at Army college.



Desmond Morris wanted to "stir things up" when he wrote *The Naked Ape*. His book stirred up considerable controversy in the scientific world, but was also a best seller.

But when he left for university, Morris - rather significantly - returned to zoology "because I didn't want to starve to death". Yet he was anything but a conscientious student, preferring to paint and make surrealist films. "As a zoology student I couldn't really see where I was going. I loved watching animals but dissection of bodies I found unpleasant."

Morris was at the point of withdrawing from zoology when he attended a lecture by the Nobel prize winning Professor of Animal Behaviour, Niko Tinbergen. "At the end of that one hour, my entire life was totally transformed. I suddenly realized there was a discipline within zoology where I could once again become a watcher. I realized that it was possible to carry out controlled observations where I didn't have to experiment on animals but by watching them for specific periods of time and counting particular behaviour patterns that were repeated in that time, but could make controlled and quantifiable experiments."

In the hit-and-run manner which typifies his life even today, Morris abandoned art and painting. "I knew I had to get a first to get to Oxford to work with Tinbergen. I had to pack in three years of study into one year. It nearly killed me but I did it." This was followed by a three-year doctoral research programme with the Dutch-born ethologist, with a further three years of post-doctoral studies. In that time, Morris published a total of 22 scientific papers on animal behaviour before the limit of his attention took effect and "virtually overnight" he left Oxford in 1956 to become head of the newly-formed London Zoo-Granada TV film unit.

This constant jumping of interests and work is a problem, Morris admits. "I am not a stickler and I regret that. It is a weakness of character but it is also a strength because I can come at a subject from unusual angles which helps to make it come alive when I am writing about it."

At the zoo he did some film work on animal behaviour but was quickly led into television as presenter of Granada's successful *Zoo Time* programme which ran for almost ten years and had an audience of two million every week.

At the same time he produced his first book, *The Biology of Art*, which if nothing else seems an appropriate title for an artistic zoologist.

"As part of my research I tried to see if I could persuade an ape to make patterns and understand shapes. I found I did not have to persuade them at all. Given the materials they would happily demonstrate their ability to make patterns. In other words, apes have a germ of an aesthetic sense."

After he was appointed curator of mammals at London Zoo, Morris completed a lengthy BBC series on animals which was aimed at adult audiences before turning his attention on the human animal. "I wanted to write a book about humans as if they were a new species coming into the zoo for the first time."

The result was *The Naked Ape*, a now legendary best seller of 8 million copies around the world, best known for its exposition of man's biological urges, particularly those of a sexual nature. A rather startled Britain was amazed to learn that the sexual organ of the male human was the biggest of all primates - so much for the famed gorilla.

"I was deliberately being provocative," Morris admitted. "I wanted to stir people up. At that time there was so much talk about man's extreme cultural variability - which seemed so obvious you would have to be an idiot to think you were saying something new there. However, there are some academics who still think that is a major discovery."

Instead Morris argued that human cultural variations were superficial and beneath them lay a common set of biological suggestions which controlled our behaviour. "Concentrating on differences is mistaken, muddled-headed and dangerous because it implies that humans can adapt freely to any circumstances with almost 'equal success'."

As a result of his commitment to biological explanations of behaviour, Morris found himself lumped together with writers such as Ardrey and scientists such as Dart, who put forward the "brutal man" theory of human evolution which claims that man developed a complex brain from handling weapons and that murder still lurks within our genes.

It is a total misrepresentation Morris stressed. "I believe man evolved as hunters of animals, not killers of men. Man could not have possibly survived if we had not modified our primate aggression with a new element of increased cooperation needed to be effective as pack hunters." Because we are great gregarious animals we can turn these genetic suggestions for hunting into more appropriate behaviour

patterns - such as research, sport or business. A favourite illustration, and typical of Morris's literal interpretation of his evidence, is the businessman's reference to "making a killing in the city" which he believes harks back to our primitive hunting days.

Murder, assault and war are not the result of brutal instincts, Morris maintains, but are a consequence of over-crowded and unnatural conditions in cities - a belief instilled from his zoo experiences and which he outlined in greater detail in his *The Human Zoo* which appeared in 1969, two years after *The Naked Ape*. This was written in the comfort of his new Malta home - a move made possible by the money and success brought by his previous best seller and not, he quite determinedly stated, because of a desire to avoid taxes.

"I had just owed to the directorship of the Institute of Contemporary Arts where I wanted to study the experimental arts and look at human aesthetic curiosity, when the success of *The Naked Ape* exploded. My health had suffered from overwork, so I took two years off to think, read, paint and write - in that order."

It was there that he began research on his encyclopaedia of human gestures - a project that in the end resulted in two separate books, firstly the relatively academic *Gestures* and then *Manwatching*, his superlative best-seller - it sold more than a million - which attempts to catalogue the complete range of human gestures and signs and trace their biological roots.

One chapter of the book, on sport, has now been turned into a full text-book which will soon be unleashed on a no doubt receptive public. *The Soccer Tribe*, a perfect subject for Morris, covers the complex rituals and superstitions of football from the pitch to the terraces to the boardroom. The latter should prove particularly interesting given that he is also a director of Oxford United football club.

The book will appear in October and will be quickly followed by another, a write-up of *The Human Race*, Morris's six-part television series on the human success story to be screened next year. This will cover those facets of human behaviour - architecture, sport, religion, and technology - that we have extended far beyond our origins.

At present, Morris is content to remain a research fellow at Wolfson College, Oxford, although quite willing to drop all the accretments of a lavish lifestyle for what ever project next takes his fancy - be it a series of new paintings, more academic research or a best selling science pot-boiler. At that is certain is that he will never find himself short of work or without a project at hand.

but not immediate future, the precise identity of Northern Ireland, or indeed of the Republic or the United Kingdom, would be difficult simply to state.

But if there was no "Eureka!" moments during the four days of the conference, vulgar pessimism was firmly jumped on. When Concorde Cruise O'Brien told his audience, after dinner on Thursday, that there was nothing for it but the old rusty tub of direct rule from Westminster, there was more fury among the diners than could ever be explained by the Californian wine and Ulster pork of the Great Hall at Queen's.

The conference did not provide a settlement for Ireland. Nor did it reconcile compelling political views. But as Crick pointed out, reconciliation was hardly the point when religion was involved. A recognition of differences could lead to toleration, but no one should hope that it would lead to the dissolution of separate identities. Even so, the separate identities of politicians and academics were a little elided by the end of the four days. A lot of academic detachment, in discussion, proved to be the good manners of political commitment. On the other hand the beliefs of the practitioners were placed in a forum where the recognition and acceptance of difference meant that something beyond either indifference or frustration seemed possible.

Rodney Barker

Conference stamps on pessimism - but produces no optimism

Integrating Northern Ireland

violently divided along boundaries of religion, community, and political identity. As one official unionist put it, it was England, if anything, which was unique in not being so divided.

So there was no point in throwing up one's hands and throwing in one's towel at the very idea of bringing a peaceful settlement to the province. But second, all the particular political schemes proposed - federalism, devolution, power sharing, direct rule, integration with the rest of the United Kingdom, or independence - proved when examined to be difficult if not impossible to apply because of the particularity of Northern Ireland's politics.

Norman Gibson, an economist from Coleraine, spoke of the "absolutist nature" of the "collation of identities" which made any settlement difficult to imagine. Another economist, John Bristol from Trinity College, Dublin, put a price tag on both integration with the Republic and an independent Northern Ireland which made both impossible without a massive British subsidy. Net government transfers from Britain to Northern Ireland were around £956m a year. Without this there would be a drop in living stan-

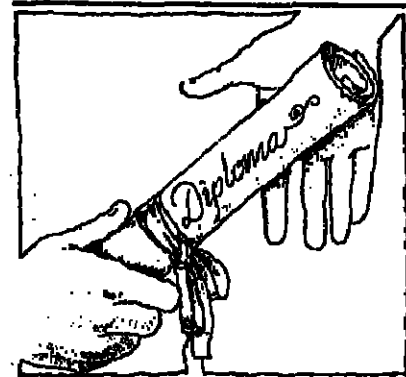
dards of around 20%. In a united Ireland, the cost of preventing this would be an increase in the total tax revenue of the south of around 50%, which would mean increases in either income tax, VAT, or some equally onerous charge. The economic cost far outran the political benefits for the south.

Paul Arthur, of the Northern Ireland Polytechnic, gave a sympathetic but pessimistic account of the possibilities of an independent Northern Ireland. This proposal, floated at various times by both the provisionalists and the UDA was now being flown by the New Ulster Political Research Group, "the spiritual wing of the UDA", as Bernard Crick put it. Its disadvantages were that, proposed as a means of overcoming communal division, it was practical without communal unity. On the other hand it was at the very least a hopeful indication of political imagination, and of the possibilities of greater northern self-reliance.

Maurice Vile from Kent, speaking on federal solutions, spent some time explaining why he believed they wouldn't work, particularly if they meant a two unit federation of the present Republic and the present

Northern Ireland. Federations were, he argued, unstable arrangements which led either to great unity or to eventual disruption. Moreover, they seemed most likely to promote harmony when their political boundaries fragmented the boundaries between communities rather than sustained them. A possible, eventual settlement might lie in finding a place for both the Republic and Northern Ireland within a future European federation, where they could associate in a larger arrangement which appeared threatening to neither. Whatever settlement might be appropriate for Northern Ireland, it would clearly have to involve some externally guaranteed civil rights. Possibly the most hopeful, but in some ways also the most ambitious proposals, came from Bernard Crick of Blackrock.

Most of the prevailing conceptions about sovereignty and territory and the precise nature and outline of states, particularly of the United Kingdom, were, Crick suggested, unreal. There was far more imprecision and therefore flexibility in the present arrangements than was generally supposed, and hence there was room for a "de facto federalism" such that, in the foreseeable



Alwyn Smith looks at medical education in the first of a series of radical critiques of professional training

Doctor in need of a cure

Although it is difficult to find anyone who is satisfied with the present state of medical education there is general agreement about its broad aims. They are to ensure that medical students acquire the knowledge, skills and personal attitudes required by doctors for the successful performance of their professional role. The problem is not with the aims but with the translation of these aims into more specific objectives and into a curriculum that facilitates the pursuit of these objectives.

The new curricula that have emerged in the last two decades represent little more than a re-shuffle of the old time-tables and a greater cramming of the students' day with intensive tuition. Little has been cut out of the old curricula even where the time devoted to older subjects has been reduced. An anatomy professor whose course was reduced from 600 hours to 300 was heard to remark that it was hard on the students who would now have to learn the same things in half the time.

One important reason for the lack of change is the complete lack of unanimity about what change is required. Although few defenders can be found for old curricula no new ones can be agreed upon and each revision of a curriculum simply stirs the old pudding. Medical education represents a compromise in which there has been an uneasy resolution of the competing claims of the profession, the public, the students and the more than 20 professional departments of which a modern medical school is composed. However, the most important constraint on change has been the lack of any agreed formulation of the role of the doctor.

Such agreement as there is about the role of the doctor remains rooted firmly in the past, and is, moreover, derived from an assessment of the doctor's traditional function which becomes increasingly difficult to sustain. Not quite the oldest profession, medicine is nevertheless among the first occupations to have become professionalized, in the modern sociological sense, into a body of practitioners collectively determining its own functions and maintaining and transmitting a body of knowledge and skills deemed relevant to those functions.

Conventional medical wisdom notes the development of medical technology and the decline in mortality rates over the past hundred years and interprets the simultaneous occurrence of these two phenomena as evidence of the increasing effectiveness of medicine in promoting health. The role of medicine for the present and future seems therefore to continue to develop the technologies of investigation and treatment as applied to human individuals and the objectives of medical education are seen as to instruct the medical student in the relevant technologies. Unfortunately, this happy analysis will not do. Its underlying assumption that all is for the best in the best of all possible medical worlds has been subjected to three distinct kinds of criticism.

The first is that health remains unequally distributed in spite of the progressive equalization of apparent access to medical care. There is wide variation in the levels of health enjoyed by people in different social and economic environments and it is clear that health depends more on social and economic factors than on medical care. A newborn individual in Britain may expect an average of five years longer life if born to parents from the professional classes than if born to parents in an unskilled manual occupation. This difference has not altered during the period since the National Health Service was created and has scarcely changed during the whole period of modern medicine.

A second criticism is that any advantages that may have accrued from the increased supply of technological medical care have been dearly bought.

Extreme exponents of this point of view have claimed that modern medical care is simply the means by which the pharmaceutical industry in particular and industrial capitalism in general turns ill-health into profit. Doctors are thus seen as agents in a conspiracy to exploit ill-health. An even more radical criticism argues that medical care is a means whereby dominant forces in society exert social control - not only over the deviant minority of the sick but eventually by increasing medicalization of ordinary life - over everyone. The case against medicalization has been strengthened by an emerging feminist critique of the role of medicine in the regulation of the female life cycle and by general apprehension about the increased tendency of the medical establishment to advocate more symptomatic screening procedures for the earlier detection of chronic diseases and to define new categories of "abnormality" as suitable cases for treatment.

But the most cogent criticisms derive from less radically inspired analyses of the causes of the decline in mortality and assessments of the present and future nature of the medical task. Central to these studies has been the work of Thomas McKeown, whose book *The Role of Medicine* (The Nuffield Provincial Hospitals Trust, 1976) summarizes not only his interpretation of the changes in health that have occurred during the past two centuries but also his assessment of the implications of these changes for the nature of the medical task.

The changes in the patterns of health and sickness over the last century or so can be briefly summarized. There has been a marked reduction in the incidence of the more lethal infectious

modern therapeutic revolution which can be said to have begun just over 50 years ago with the introduction of insulin treatment for diabetes, has yielded the sulphonamides, the antibiotics, the synthetic hormones and a range of drugs capable of influencing cardiovascular function. These all demonstrably useful in individual cases. It is nevertheless true that all but a small part of the decline in mortality from infectious took place before either sulphonamides and antibiotics were introduced, that the hazards of synthetic hormones are now beginning to be recognized and that total age-standardized morbidity and mortality from cardiovascular disease has not materially changed in magnitude for several decades.

Diagnostic techniques have undergone developments comparable with those in therapeutics. In spite of the fact that the most serious chronic diseases which might be thought to be likely to benefit from earlier or more precise diagnosis do not seem to have been reduced in severity. Survival for most of the common forms of cancer has changed very little, if at all; there is no evidence that survival after a coronary thrombosis or a stroke has been improved and arthritis continues to represent a major source of disability and handicap.

What emerges quite clearly from any careful analysis of trends in health and in medical practice is the relative lack of any connexion between them. The health of people in industrialized countries has improved mainly in respect of the declining importance of infectious disease and this is due largely to socio-economic changes which have improved the physical and social environment in respect of infection. Nevertheless, the changes have also

taken by patients seeking advice or help in relation to problems they have experienced but is occasionally offered at the initiative of doctors who recognize or fore-see the problems of their patients. The specific nature of the advice or assistance that distinguishes it as medical is determined partly by the characteristics assigned by society to the role of medicine and partly by the problems with which individuals confront it. What is important is that in the context of chronic progressively disabling diseases the acceptance of the doctor's help or advice is much less readily to be assumed and the effective management of such illness rests much more with the patient and the family than was the case when the typical consultation related to an acutely threatening emergency.

A more important and more neglected issue is the relationship of medicine as an institution to the society in which it is located. Doctors have traditionally claimed to be apart from politics although they can no more escape political involvement than anyone else. But the political influence of doctors has been more implicit than explicit and thus relatively ineffectively focussed on the crucial issues. The main controllable determinants of health and ill-health are almost all the consequences of political activity and decisions. It is obvious that most of the potentially tractable threats to health arise from exposure to harmful environments and indulgence in harmful behaviour. Avoidance of these by personal choice of action is usually possible to only a trivial extent for most people. For example, smoking, alcohol consumption and dietary choice are essentially products of general social and agricultural policies profoundly affecting behaviour and consumption. In addition, the expenditure of communal resources on explicit health objectives must always be in political competition with other areas of socially oriented activity. All these areas of debate and decisions are subjected to political influences from a variety of powerful "lobbies" and if choice is to take account of health issues the health "lobby" must be persuasive.

The medical influence in the health lobby has so far been exerted more in the interests of the professional than of the health of the community as a whole. The role of the doctor is therefore to be ready to offer such advice and help to individuals and to the community as a whole as is needed to promote most effectively the health both of individuals and the community. The role will increasingly have to be played in a society in which chronic, handicapping and ultimately lethal conditions will increase in prevalence and make increasing demands for resources in a competitive economic context. Cure will become relatively less possible than formerly and there will need to be a relatively increased emphasis on prevention and care. At the same time the major influences involved in prevention and the major resources required for care are passing from the traditional domain of medical authority and into the wider social, economic and political sphere. The role of the doctor is going to be different and more difficult than it has been. It remains to consider what knowledge, skills and attitudes will best fit doctors for that role and what education is required to foster them.

Medical education involves the students' acquisition of the necessary knowledge and skills and their socialization into an appropriate professional role. Traditionally it comprises a pre-clinical phase dominated by instruction in anatomy, physiology and biochemistry; a clinical phase devoted principally to the acquisition of diagnostic skills; the supplementation of these in the para-clinical disciplines of pathology, microbiology and pharmacology; and a short postgraduate pre-

registration period of supervised service experience as a house officer. Clinical work is broadly divided into medicine, surgery and obstetrics with variable elements of psychiatry, paediatrics, general practice and community medicine - although the latter two subjects receive no more than token attention in most curricula. Emphasis in clinical work is overwhelmingly on diagnosis since it is widely believed that it is diagnosis that is difficult and important while treatment is either obvious, ineffective, or essentially the province of some other profession - usually of an auxiliary character. In practice, most medical treatment is restricted to the prescription of proprietary pharmaceutical substances and such education as most doctors have in their use is largely provided by advertising from the pharmaceutical companies. The most important care of most sick people is provided by their families, supported by nurses, physiotherapists and other helpers.

An important consideration is that of whether undergraduate medical education is to be viewed as a predominantly theoretical preparation for a later vocational training or whether it should aim at producing doctors who can safely be entrusted with a measure of independent professional practice. Until the introduction of the compulsory pre-registration hospital appointments about 30 years ago, newly graduated doctors might elect to go straight into general practice and it seems important to medical education to ensure that a medical graduate was at least safe to be left alone in such independent practice. Since then the compulsory year in house appointments and the development of training arrangements in general practice has progressively reduced the need for this emphasis on safety. Nevertheless, the considerable degree to which junior hospital practice may be unsupervised and the natural conservatism of medical educators have combined to retain a large element of safety-consciousness in both curricular design and examination rituals. Candidates fail their final MB for missing physical signs rather than for their ignorance of general principles.

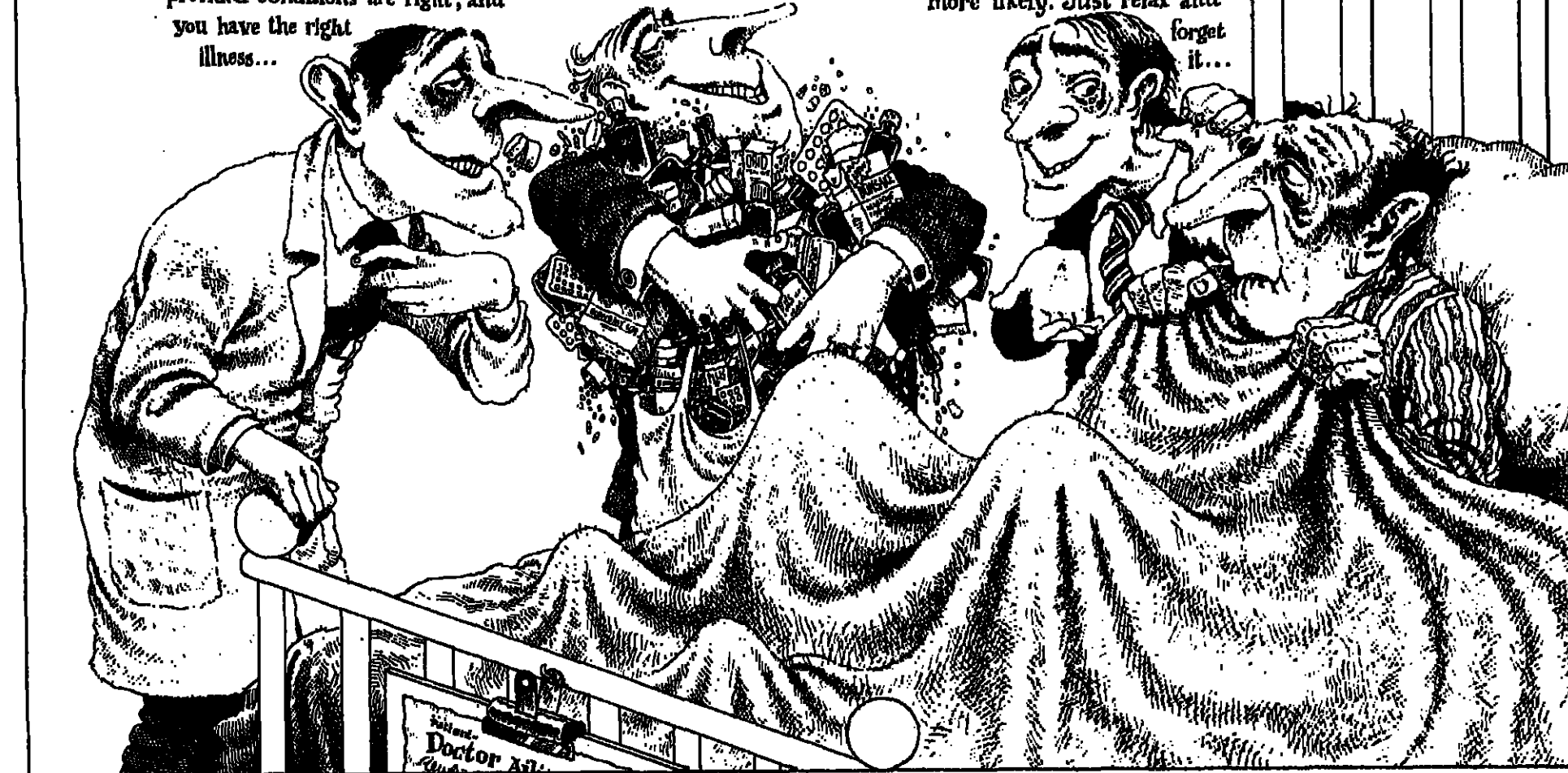
The issue is important. Medical curricula at present are designed around the assumption that the important aspects of the doctor and much of the understanding of a patient's personal, as distinct from pathological, problems will be acquired after graduation and as a result of professional experience. Undergraduate curricula traditionally concentrate on an understanding of the mechanisms of disease processes and on acquisition of the basic skills of physical examination. The traditional curriculum begins with a pre-clinical course which essentially covers the structure and mechanisms of the human body in an abstract idealized state which is thought of as health. It goes on to a consideration of the main kinds of derangements to which those mechanisms may be subject, combined with opportunities to learn about the human consequences of such derangements are minimal and considerable of their causes remains largely confined to the role of micro-organisms. The experiences which may have led a patient to consult a doctor and provide an opportunity for the exercise of diagnostic expertise are simply categorised into presenting symptoms and labelled.

The general objectives of a rational curriculum might be summarised as to acquaint the student with the nature and variety of the human experience of health and illness; to introduce the student to the profession's knowledge and understanding of the causes and mechanisms and consequences of that experience; to provide an adequate opportunity for the students to acquire and exercise under supervision the

... Don't worry. Science can do wonderful things these days - provided conditions are right, and you have the right illness...

... Yes, and I have lots of pills. Look. American Express will do nicely, sir...

... And you're a professional man - recovery is so much more likely. Just relax and forget it...



skills that have been developed by the profession for helping people to influence that experience favourably: to help the student to understand the relationships that exist between his own profession and those other professions and institutions which share the task of supporting people's efforts to seek, maintain and restore their health. Such a curriculum would deal with the nature of health and of ill-health, the causes of ill-health in individuals and the determinants of its prevalence in communities, the problems that arise from ill-health both in individuals and in communities, techniques for the detection and identification of ill-health, the remedies available for ill-health both in individuals and communities, and the social and political context in which illness is experienced and medicine is practised.

It will be argued by apologists for the present pattern of medical education that opportunities are offered for consideration of all these issues and that no radical changes are therefore required. The problem is one of balance. It is true that almost any topic can be discussed in the five years of the traditional curriculum, especially since a considerable time is spent in ward rounds and clinics where tutorial activity can be very flexibly developed. Nevertheless, few honest observers of the medical education scene would deny that medical education has become increasingly dedicated to technological issues especially in the teaching hospitals.

Perhaps the first requirement for change is a new approach to the selection of medical students. At present, most medical schools in this country require three passes at A level, which must usually be in either physics, chemistry and biology or physics, chemistry and mathematics. The relatively few schools that countenance any very different A level requirement mostly insist on a pre-medical year in which physics and chemistry at least are mandatory. In practice, most medical students have A levels in physics and chemistry together with either biology or mathematics. The latter is increasingly in popularity, probably because it is easier to predict good performances in mathematics than in biology.

An interesting result of this trend is that an increasing proportion of medical students have no background in general biology, a subject that would once have been regarded as much the most important of the background

sciences for a doctor. The trend may go some way to explain the tendency for medical students to approach a sick human being as presenting a problem in physics and chemistry.

The present writer entered medical school with Higher School Certificate in French, history and Latin, having done a pre-medical course in physics, chemistry and biology. In retrospect, only the biology seemed relevant: such little physics and chemistry as is needed could be included in the anatomy and physiology courses particularly if an O level in general science could be assumed. My own experience is that a background of school certificate Greek has been far more practically useful than the first MB physics, in spite of the intellectual stimulation provided by the latter.

It should not be difficult to recast the syllabuses in anatomy, physiology and biochemistry to include the necessary introductory concepts now provided by A levels. This would make it possible to recruit medical students from a much wider academic background. There would be three distinct kinds of gain. First, it would be possible to select medical students from a narrower band of the upper end of the distribution of ability. Secondly, it would widen the range of intellectual sympathies of medical students and eventually the medical profession. Thirdly, it would introduce into the medical schools a proportion of students with experience of the higher standards of scholastic and intellectual rigour and imagination that prevail in arts sixth forms as compared with those of science.

The necessity to re-structure the curricula in the pre-clinical sciences might provide an opportunity to base them more on human biology as distinct from clinical technology. One of the more striking deficiencies in present medical education is the absence of any consideration of the nature of science. Presumably, this is omitted on the assumption that it will have been dealt with in schools science courses. Too often this assumption is unfounded and the result is that medical students have typically very little conception of the nature of function of science. They tend to view science as a catalogue of indisputable facts.

An important candidate for change in most medical school curricula is the sharp separation of the curriculum into pre-clinical and clinical stages. Some new curricula have combined to introduce what was once thought of as

clinical experience into the early years of the course and rather fewer have combined to continue some scientific teaching in the clinical stage. The disadvantages of the older two-stage arrangement are many. A particularly important one is that most medical students come into medicine with at least some wish to engage in relationships with patients and they become very impatient with being confined to the laboratory and the dissecting room. Once they are released from this confinement there is often a backlash against scientific subjects sometimes amounting to contempt.

There are many powerful arguments for combining theoretical learning with practical experience so that the two modes of learning may mutually reinforce each other and provide a cross-fertilization of insights. The disadvantages are mainly those deriving from the formidable nature of the task of restructuring established time-tables and the logistics of providing clinical experience for a large number of students.

A disadvantage that is more important and which needs to be faced is that earlier clinical experience may result in distress for the less mature students who in turn may cause greater distress to patients.

There is no doubt that clinical experience is potentially distressing and may be more so for just the kind of sympathetic individuals it might be desirable to recruit into medicine. The problem is faced in nursing education where the students are appreciably younger than medical students and where some of the loss of students is likely to be due to this cause. It is usually believed that nursing students are helped to cope with their potential distress by having useful caring tasks to perform. This might be an approach to a solution of the problem in the case of medical students.

It is certainly the case that medical students often enter medical school with a substantial caring motivation which traditional patterns of medical education do much to suppress or discourage. Some of this suppression is in the interests of protecting students. Both they and nursing students must learn to insulate themselves from too much involvement with patients in the interests of their own mental and emotional stability. At present there is little positive attempt to help students achieve a responsible disengagement

while retaining their caring motivation. Students often cope with the problem by suppressing their fellow-feeling for patients and adopting a view of patients as technological problems rather than people. It is at least conceivable that better solutions can be found for these problems and that they might usefully be based on devising a practical caring role for students. It is even possible that students trained in such a way might become better doctors.

One of the most vexed questions in medical curricular discussions is the possible desirability of effecting a shift away from the emphasis on patients as technical problems and towards patients as people. One of the more facile solutions that has been proposed is the introduction of social sciences into the medical curriculum - presumably at the expense either of reducing the content of some present subjects or of adding further to the medical students' already formidable learning requirement. Any reduction of the existing curricular elements is likely to be strenuously resisted and the addition of new learning requirements is hardly likely to be popular with medical students particularly as the characteristic didactic style of the social sciences calls for a very wide reading of material quite unlike that of the conventional medical texts.

Nevertheless, it is difficult to resist the view that the social sciences have something to offer to medical science and practice that is much more relevant to the present and future task of the medical profession than much of what is currently taught by the pre-clinical and para-clinical department. This is perhaps most true of sociology which has a well-developed research tradition within the fields of health experience and behaviour and of medical practice and health services organization.

There are several dilemmas confronting those who advocate the inclusion of social science subjects in the medical curriculum. First, there is the question of how much basic social science is necessary to ensure that medically relevant social science can be set in an appropriate academic and critical context. Next there is the issue of whether to press for the introduction of social science into existing medical school curricula where the issue of whether the subjects are pre-clinical or para-clinical poses considerable problems or whether to press for a comprehensively reconstructed curriculum in

which a more natural place for social sciences would be found. Finally, there is the problem of whether social sciences in the medical curriculum would be best taught from existing departments outside the medical faculty or whether new departments of medical social science should be developed analogous to those of medical biochemistry and medical microbiology. Such courses as have so far been introduced exhibit considerable variation in all these respects, the most common pattern being to exploit social scientists already engaged mainly in a research capacity in departments of community medicine, general practice and psychiatry.

It would be quite impertinent for any individual, and particularly for one no longer primarily concerned with teaching medical students, to offer solutions to the many problems posed by the unsatisfactory state of medical education and the crisis of relevance through which the medical profession itself is passing or is about to pass. The need is for a much more radical rethinking of the whole philosophy of the profession and its educators to bring both into line with the medical needs of human societies approaching a new century in which not only the needs of human beings in general will be quite different from those of the nineteenth century in which most of our existing traditions were established. However, it does seem worth restating the principal issues. First, health depends far more on how society in general is organized than on what doctors can do for sick individuals. Secondly, most illness that cannot be prevented is equally unresponsive to attempts at its cure. Thirdly, those professionally charged with the promotion of health will increasingly have to recognise that health is one among several legitimate social goals competing for the resources that human labour alone can create. Health is inescapably, therefore, a social and political issue rather than a technological one; if medicine is to be a rewarding as well as a useful activity, the education of doctors will have to take account of that.

The author is head of the department of epidemiology and social research at the University Hospital of South Manchester.

Other articles in this series will be on architecture, accountancy and the law.

Maurice Kogan argues that recent changes in the role of the Medical Research Council may be more optimistic than well-judged

Medicine and money matters

On 28 October 1980, the DHSS and the Scottish Home and Health Department (SHHD) announced an agreement with the Medical Research Council that decisively alters policy for the commissioning of research. In 1973 a quarter of the MRC's monies were transferred from the science budget to the health departments who were to identify the biomedical research relevant to the health services which the MRC would then be asked to commission. This money—now about £14m—is to be returned. But, and more significantly, the MRC will use up to £2m a year on health services research which the DHSS may augment by additional sums.

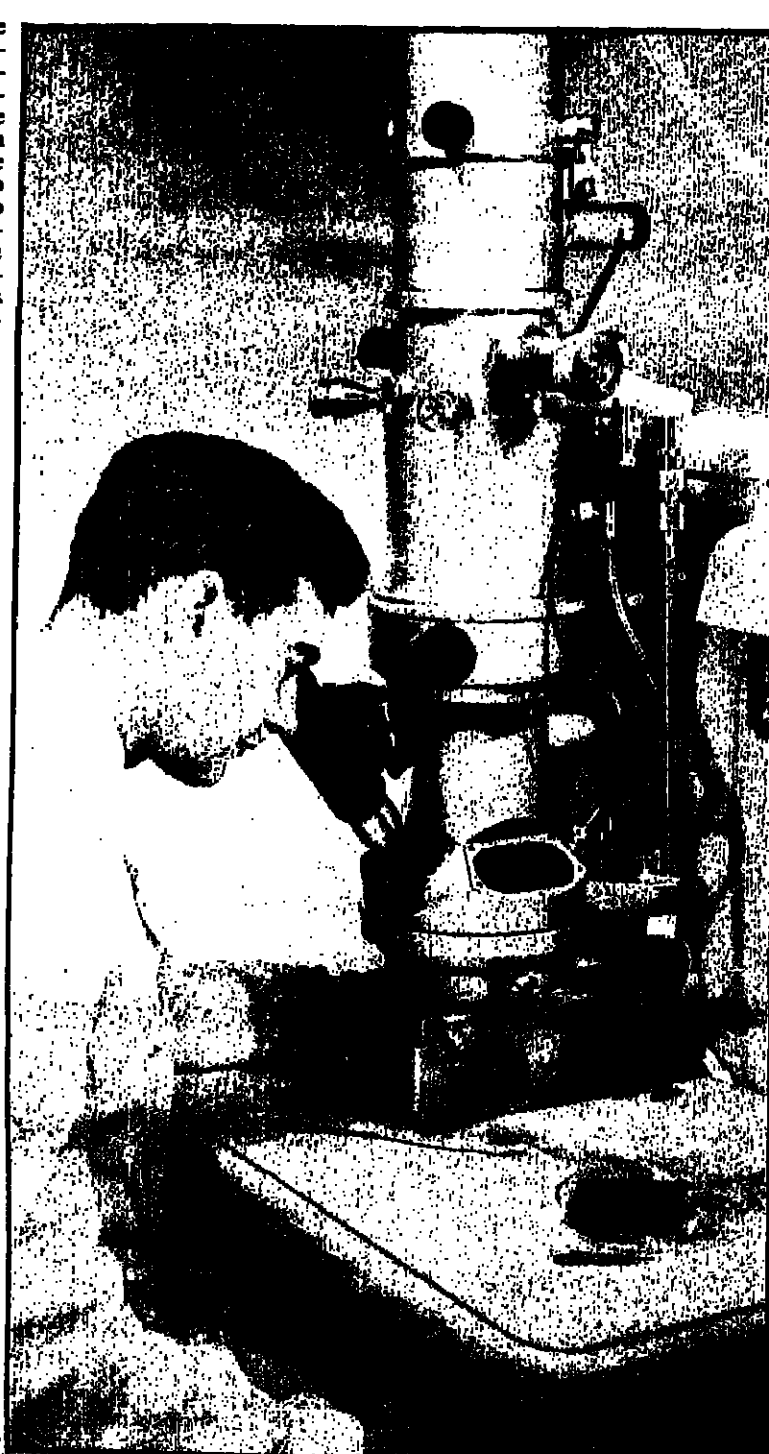
Two themes come together in this change of policy. The first is the reassertion of a research council's dominance over the more "fundamental" end of the spectrum of research that, nonetheless, contributes to useable knowledge. The second is a change in the commitment of the DHSS to the commissioning of research directly relevant to health care systems.

The return of funds for biomedical research need cause no surprise. The Departments themselves felt that they were unable to put forward ideas for new biomedical research amounting to 25% of the MRC's annual income, that being the amount identified as being particularly relevant to questions of health policy and service delivery. The MRC's own stock-taking arrangements were being duplicated by DHSS review processes. By the time the arrangements came under the scrutiny of the Public Accounts Committee in 1979, health departments were receptive to the notion that they might abandon the formal commissioning arrangements in the biomedical field if, to quote the PAC, "they added nothing of substance to the guidance and advice which the health departments could in any case continue to provide through improved arrangements for consultation." Moreover, these changes must be seen against the DHSS' general intention to reduce both its own staff and its direct engagement in many of the activities for which it has hitherto been responsible.

It is, in fact, the proposals for health service as opposed to biomedical research that seem to be more optimistic than well-judged. The DHSS has gone well beyond the Rothschild Report which was naive in its statement of the customer-contractor principle. Rothschild assumed that research institutions were strong enough to negotiate as "contractors" in a market where science could be procured as clearly specified place work. This notion was too narrow for developments in health and social research so the Department attempted to do two things in elaborate Rothschild. It tried, through the creation of a Chief Scientist post and with the help of external advisers, to identify and to commission disciplined enquiry that could enhance policy at the centre and practice within the field authorities and institutions. To this end it created research liaison groups in which policy makers and scientists worked together. Most who know the RLGs think they are beginning to change policy makers' view of science although other parts of the system have proved to be less useful. At the same time, but less systematically, it began to broaden the range of disciplined enquiry upon which it could draw.

What might happen now? The present changes are far less drastic than earlier rumour suggested and the DHSS itself will continue, it seems, to commission much of the research that it requires. But they imply a reduction in the DHSS' own working commitment to identifying research at the same time as the government is placing more confidence in the MRC to do some of its work for it.

Part of the difficulty is that there is a spectrum of disciplined enquiry relevant to health care. Broadly speaking, biomedical science identifies the causes of disease, clinically directed



research develops hypotheses about treatment and about patient management; so may health service research but it is also concerned with the management of health care systems and services.

There are important institutional differences between biomedical and health services research. Medical science is tightly and comprehensively organized. It assumes that medical practice can be derived from firmly established experimental science. The community of a self-contained scientific community that can establish its own field. It is not readily permeated by policy concerns. Health services research is by contrast diverse in its institutional bases and less clearly centred in the scientific community. The paradigms for much of its work are embryonic and in some fields the provinces of the researcher and the policy maker are not sharply distinguished.

Practice and service related research have not been a forte of the research councils. They have not always been able to lift their perspectives from the laboratory and control group to the more untidy social problems that current DHSS programmes have to tackle. Their own structures reflect the organization of knowledge as it is to be found within academic disciplines. Attempts to sponsor policy-related research have been sustained and committed within the SSRC but are at a different level of abstraction from the

concerns of those who face the issues in the field. The MRC has the enormous advantage of enjoying the confidence of a very self-confident profession. But it is essentially a human biological research council. If it devotes itself increasingly to health service research, it will find its structure and the scholarly interests of its leading members give room for research on, say, prescribing patterns of GPs, or the content of training of nurses, or the personal and social development of the mentally handicapped?

The new arrangements therefore assume a change in ethos and perspective within the MRC. In the past, however, it was felt that scientific excellence had not been geared to government built up its own system for commissioning research in the first place. And it still seems optimistic to assume that academic serendipity will not only produce good science but also attack the full range of socially relevant sciences. Moreover, health service research entails social sciences, yet the Concordat does not make equivalent arrangements with the SSRC whom, it should be assumed, would have the more appropriate concerns.

How will the MRC engage with those responsible for policies and for funding the field authorities? That is difficult enough today. The present arrangements, within the DHSS, are a brokerage system. Research managers in the Office of the Chief Scientist liaise with policy makers and bring them together with scientific advice. Policy divisions have in-

creasingly stated their needs in the research liaison groups and have made contacts with scientists who view the world differently from them. The MRC now expresses its willingness to listen to the customer voice. But having departmental representatives sitting on a research board is very different from DHSS policy makers leading RLGs which are expected to make sure that something happens.

It is not easy for policy makers and scientists to develop joint programmes. The role of the Chief Scientist is a key factor in the modes to be adopted. At the same time as the DHSS-SHHD-MRC concordat is being installed, his role is, in fact, being reviewed. The DHSS has had three chief scientists who have all been rightly concerned with advancing scientific standards. The next stage might have been to develop the range of science encouraged by government.

Working within the push and pull from the field of practice and of policy making, the Chief Scientist might have moved the DHSS from too exclusive a dependence on the criteria of experimental science towards the methods more appropriate to the 'soft' areas of service delivery and impact. The Chief Scientist must, however, not only be concerned with developing science that is both rigorous and eclectic, but also help connect science and policy. The present theory is that the policy makers decide policy and express their needs for research, with the help of the scientific members of the research liaison groups. The Chief Scientist judges whether the problem is researchable. But expressing policy needs and converting them into research are not separable procedures.

Policy related research calls for an entrepreneurial function in the Chief Scientist who should sniff out the potential for disciplined enquiry in the areas of policy and practice. The starting point for good policy related science is not in fact science but the policy problems it attacks. Getting into the skin of the policy system and drawing out its problems calls for a wide range of scientific sympathies together with an ability to enter into the policy arguments. It involves bringing together the many sources of data available to the DHSS. One is commissioned research. Another is the more fundamental research produced by research councils. The DHSS has, too, other important sources of knowledge with access to the field in such professional groups as the medical, nursing and social work officers. The Chief Scientist could be a broker mediating between policy planning, professional evaluation and research enquiry. New arrangements will serve only to increase the demands of such a role, and indicate that that is not where priorities are being placed.

Between 1972 and 1978 the DHSS made a courageous attempt to open itself to help from its 80 or so scientific advisers working together, with policy makers in research liaison groups. That system still remains. But its activities are diminishing and its budget must be in danger of being reduced, particularly since the new arrangements assume that the MRC will take up a stronger role in research in the health services field.

The fruitful tension and co-operation between customer and researcher was beginning to show promise by 1978 when the present arrangements began to be argued about. They are now at risk. It is a pity that the DHSS has lowered its expectations of a potentially creative experiment in government opening itself to external influences. Something remains of the post-Rothschild arrangements but the diversion created by the new Concordat with MRC bodes ill for policy related research at a time when government is impatient of direct commitment in the field of social intervention.

The author is professor of government and social administration at Brunel University.

Keeping pace with INSTEP

Alongside the major league organizations such as the CNA and the regional advisory councils (RACs) are a number of lesser-known bodies which take an ever-growing role in the centralized oversight of sectors of tertiary education. One of the least known but most rapidly developing of these is INSTEP, the In-Service and Training Education Panel based at Leicester.

Wholly financed by the Department of Education and Science, the Panel has responsibility for the national validation and central co-ordination of in-service training for full-time youth and community service personnel throughout England and Wales, and was originally established in 1976 by the DES.

The Panel has approached its task with impressive energy. Its validation of the professional aspects of in-service training is intended to assist in the raising of standards, the encouragement of the best use of resources and securing of national acceptability through accreditation of specific course provisions.

The Panel has been active and thorough in its validating role. Business has been brisk and since January 1979 alone it has received 33 proposals for course endorsement, many concerning long established courses in the field. Preliminary discussions, site visits and conditional approvals show a close similarity to familiar CNA strategies. So far only 17 courses have been endorsed; a considerable number of them have been significantly changed in the process in response to Panel requirements. A further 5 are in the pipeline.

INSTEP has fulfilled its co-ordinating role with equal vigour. Here the key task is the encouragement of policies of staff development by authorities and the voluntary organizations and the dissemination of details of good practice. Initially this has been done through publications and a series of courses and conferences, but increasingly the Panel is invited to act as a consultant in response to a growing number of invitations by authorities and organizations. The range of these invitations is extending rapidly and currently includes not only many educational and community organizations but also the Council for Education Training and Social Work, the National Children's Home, the National Association of Citizens Advice Bureaux with all of whom INSTEP is active dialogue.

Yet the development of INSTEP has not been achieved without arousing considerable doubt and some hostility in the field. Organizations have welcomed the prospect of enhanced recognition offered by INSTEP, but have balked at the related constraints. The Training Agencies Group—a liaison of major training organizations in the Youth and Community field—has recently been represented on the Panel and by no means all of its members are yet working closely with INSTEP. A recent statement produced by the Staffs of Training Agencies Group contained a string of criticisms of INSTEP activities. They include the procedures established seem to produce a conformity, a narrowing and restriction; procedures seem to favor submissions into a management 'straightjacket'; the amount of documentation requested seems excessive; the demands upon staff time and finance which present procedures demand are regarded as exorbitant and unnecessary.

So predictable are these criticisms that a sharp student of the contemporary scene may well see them as strong evidence of INSTEP's growing efficacy and power. Certainly, they do not seem to have impeded the growth of INSTEP's workload, and standing. Notwithstanding the DES will respond favourably to its requests for a substantial rise in its staffing and its operating budget. In the conditions of the tight budget, INSTEP may well turn out to be a greater growth potential than its situations and organizations it serves.

The author is a professor of education at Keele University and was a member of INSTEP.

BOOKS

The obscure historian of mankind's follies

God's Fifth Column: a biography of an age, 1890-1940

by William Gerhardt

edited by Michael Holroyd and Robert Skidelsky
Hodder & Stoughton, £11.95
ISBN 0 340 26340 7

by K. G. Robbins

By the time of his death in 1977 in his eighty-second year, William Gerhardt had lived for a quarter of a century in virtual obscurity, safe in the knowledge that he had a brilliant past behind him. He had sensibly got his autobiography out of the way in 1931 at the age of 35. In that same year, while others busied themselves with National Government Gold Standards, Gerhardt found himself a flat in Rossett House, behind Broadcasting House. It was to be his home for the rest of his life.

After the Second World War he was increasingly reluctant to savour the charms of the world that lay beyond his humble doorstep. Even the weather, obscured by perpetually drawn curtains, failed to excite his interest. Latterly, such life-supports as newspapers, radio, gramophone and television were withdrawn in response to financial exigencies. Visitors during the winter months did not share his indifference to heating. Only the telephone remained as an unmitigated boon: callers would sometimes receive a gentle invitation to an unpredictable tea; answers a surprising reminder that a voice from the past was alive and emotionally flourishing in the heart of the West End.

Gerhardt, who apparently spoke to the end with a faint Russian accent, charmed and bewitched those with whom he came in contact during these decades. Although clearly out of contact with the gear world, he was not inactive. Not without due consideration, he changed the spelling of his name, adding the final "e"—a step for which there was good historical warrant. It was to be taken as a reassertion of identity rather than a disavowal of the past. His name did cause some confusion, however, especially since pronouncements of his initial letter showed a tiresome divergence.

Such modest stillness and tranquillity led to the inevitable speculation that he was at work on a major novel with which to confront, from the grave, a faithless generation. It was as a novelist that Gerhardt had made his reputation in the 1920s. He had spent his childhood in St Petersburg where his father, a British cotton manufacturer, had settled. He returned to England as a young man to train for a commercial career but found himself in 1915 a trooper in the Royal Scots Greys. More at home in Russian than English, and hence a somewhat unusual recruit, he returned to Russia to observe the strange events of 1917 from the security of the British Embassy in what had become Petrograd.

Collecting experience and decorations from grateful governments, he then spent some time with the British Military Mission in Siberia, before eventually wrestling with the mysteries of the University of Oxford, where he read English and wrote a book on Chekhov. Finally, not surprisingly, was the title of his first novel—a comic reflection on his recent experience (it has now been released by Penguin Books). Other novels followed in the 1920s, the best known being *The Polyglot*. He became, in Arnold Bennett's words (cited by the editors), "the poet of the intelligentsia and the darling of Mayhew". His life was peripatetic—novels in the 1930s being written variously in the Austrian Alps, the South of France and Tunisia. And he was as prolific as he was peripatetic. His books attracted praise from Graham Greene and Evelyn Waugh, among others. C.P. Snow recognized in him a comic writer of genius. He attempted to publish a catalogue before Gerhardt himself withdrew it for revision. Subsequently, prompted by deficiencies in his bank balance, it was understood that the process of revision was taking place but in the end it never emerged. Although Holroyd and Skidelsky do not disclose at what point they appeared on the scene, they have omitted about a quarter of the original text and left themselves free to produce a version where the author failed. Their previous work makes them admirable candidates for this task. The biography is intended to throw into relief what he considered to be the motive-power of the Age—the natural resentment engendered by any person, class, nation, movement or religion which attempted to justify its hegemony by identifying its interests with the supposed good of others. It was Count Tolstoy who, towards the end of a life of intermittent

There is independent testimony to the fact that visitors to Gerhardt in his later years were not supplied with tea but with a



William Gerhardt in 1973.

self during the war with a timely commission to write his biography—a slim volume which A.J.P. Taylor in his biography of Beaverbrook considers the only contemporary account of any value. The editors of *God's Fifth Column* cannot resist a little sociological speculation in commenting on this rather bizarre relationship. Beaverbrook and Gerhardt, they conclude, both "outsiders", were drawn to each other partly by their mutual precariousness. It might also be observed that, at this juncture, Beaverbrook wished to cherish any link with Leninism. Gerhardt himself seems to have had a surprisingly good war—producing very acceptable scripts which helped to teach listeners to the European Division of the BBC English by Radio. He resigned from the BBC in March 1945 with the ostensible objective of concentrating more fully on his literary work.

After his death, although two concluding chapters of a tetralogy in one volume had appeared in 1962, no new novel, major or minor, was duly distributed in large cardboard boxes but with a helpful and exhaustive card index, was a "structure" on paper of many colours. There was also *God's Fifth Column*—which had alternative titles which may, for all we know, have been closer to the author's heart. Conceived in the autumn of 1939, its actual composition was impeded by the unfortunate outbreak of the war and the subsequent complications. There is evidence that Gerhardt tackled his task as purposefully as circumstances permitted. He realized that all sorts of funny things were apt to descend from the sky in these years and took steps to protect himself, while writing, by wearing a saucer on his head. Such sensible precautions enabled him to take the manuscript to a publisher in the summer of 1942 and it got as far as the publishers' catalogue before Gerhardt himself withdrew it for revision. Subsequently, prompted by deficiencies in his bank balance, it was understood that the process of revision was taking place but in the end it never emerged. Although Holroyd and Skidelsky do not disclose at what point they appeared on the scene, they have omitted about a quarter of the original text and left themselves free to produce a version where the author failed. Their previous work makes them admirable candidates for this task. The biography is intended to throw into relief what he considered to be the motive-power of the Age—the natural resentment engendered by any person, class, nation, movement or religion which attempted to justify its hegemony by identifying its interests with the supposed good of others. It was Count Tolstoy who, towards the end of a life of intermittent

Gerhardt considered late-nineteenth-century Europe a backward continent which had not rid itself of the famous assumption that class distinctions were inevitable. England was a "medieval" land. France stuck in the eighteenth century, and Germany yoked with "pumpkin-elm Court" caked over with etiquette and culture. The Russian village commune remained what it had been in an R10. Into this world of medieval survivals came the baby Adolf Hitler, D.H. Lawrence the Nottinghamshire street urchin, while Nicholas Ulanov, Marcel Proust, Kaiser Wilhelm II and old Tolstoy went about their business. If someone is tempted to say that Picasso, or some other local hero, deserves a place in this collective portrait, Gerhardt has an answer. The biography is intended to throw into relief what he considered to be the motive-power of the Age—the natural resentment engendered by any person, class, nation, movement or religion which attempted to justify its hegemony by identifying its interests with the supposed good of others. It was Count Tolstoy who, towards the end of a life of intermittent

There is independent testimony to the fact that visitors to Gerhardt in his later years were not supplied with tea but with a

century his pandering to the senile cynicism of Clemenceau was to pave the way for Hitler, and his mellow diplomacy was to create the problem of Palestine. It is in such trains of thought that Gerhardt specializes.

Queen Victoria, of course, was still there at the beginning of the century, though her intrusion into it was not lengthy. That she was every inch a queen Gerhardt neatly illustrates by noting that she never troubled to see whether there was a chair beneath her whenever she was moved to sit down. "The Empress Eugénie, her guest at the Opera, who was 'every other inch' an empress, unwilling to take the risk, glanced round to make sure. Such an incident is the natural prelude to a discussion of the Statute of Westminster and Lenin and the class struggle. Gerhardt finds it puzzling that, during his short residence in London, "Mr Richter" should have so failed to understand a country where public lavatories banged their doors in the face of the public at dusk as to predict revolution. It is but a short step to meditation on Tolstoy's obsession with love and the awkward reality of his wife, Chekhov dies. His coffin (as if in one of his own short stories) arrives at his funeral in a truck marked "For Oysters" followed, for a time, by a funeral procession which believed it was following the remains of a general killed in the Russo-Japanese war. Hitler is located in a casual ward in a Viennese clinichouse as Margot's husband moves into superior accommodation. As for 1914, Alice sets out from Wimmerland on a fact-finding expedition and a variety of new figures come under scrutiny before the scraps of paper are considered. Gerhardt cannot understand why Sir Edward Grey's broken-backed attempt to think on his feet on August 3 should have been held up as a model of lucidity. He cannot understand a great many things about the next four years either. Once again, the mood is captured in a series of vignettes—Lenin changes place with Nicholas and then Proust dies. The Russian and the Frenchman were born within a year and died within eighteen months of each other. They both applied themselves to the task of eradicating the evil error of an imagined superiority of birth, the one practically, through revolution, the other artistically, through analysis. And then, almost before we can notice what has happened, we are back in September 1938 and the world had clearly failed to bring about a universal change of heart when there was yet time. Once again, adolescents had contrived to climb into the signal box. At this juncture, Gerhardt inserts his own feelings more directly. He believes that the ordinary citizen the world over has outstripped the goodwill of his government.

The epilogue takes the form of a meditation on the future. The past that he had surveyed offered little ground for complacency. But amid all the suffering, all the shaking of the foundations, "God's Fifth Column" was at work, subverting all inconclusive formations and working towards a human society which was acceptable to God. Professional politicians should be by-passed and the hideous idol of sovereign nationhood destroyed. The World State should be run in such a way that the individual's needs would be met but some of his emotions or even interests should be engaged. And so the vision continued. It must be confessed that his description of the follies and foolishness of man has a greater appeal than his prescription for their abolition. The world after 1945 showed little disposition to conform to Gerhardt's ideal, even if there was evidence that *God's Fifth Column* was still at work exposing the absurdities and pretensions of the new order.

There was a point when the author speculated that the only thing which might prevent the sale of *God's Fifth Column* would be if it were to be lauded for its own secret purposes by that same fifth column. Happily, Holroyd and Skidelsky seem to have cleared matters in that quarter. Their edition of this extraordinary work will amuse, alarm and instruct even if its mysterious thesis will not necessarily satisfy the fact-grubbing historian despised by the author. In fact, mistakes of detail are few and such as these are apparent more in the index than in the text. Gerhardt's polyglot past and his wit and style as a writer in English combine to produce a biography well worth resurrecting.

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BOOKS

Those vexing value issues

A Guide to the Culture of Science, Technology and Medicine
edited by Paul T. Durbin
Collier-Macmillan, £30.00
ISBN 0 02 907820 2

— I understand the title, for "culture" read "history, philosophy and sociology". The idea of this large volume — funded by the United States National Endowment for the Humanities and the National Science Foundation — is to survey the academic disciplines that relate to "value issues in the sciences, technology and biomedicine". Yes, that is quite a good idea. Many of us now teaching and/or researching in this general area should be most grateful for it.

Of course it is much too large a topic to be expounded fully. Essentially, this is a well-written guide to the literature, a critical bibliography, the scholarly virtues of which would be completeness, accuracy, eclecticism and tolerance, rather than depth and originality. It would be a work to consult a page or so at a time, rather than to read consecutively.

For that reason the overall structure — a chapter on each possible combination of history, philosophy or sociology, with science, technology or medicine, rounded off with one on "Science Policy Studies" — is probably as convenient as any other that might have been chosen. These combinations do not define compact enough centres around which any author can nucleate a more or less relevant body of material. The authors whose names I know ought to be competent enough authorities to cover their own particular fields and to make the necessary connections with their neighbours. Better to allow some overlaps, (for example, I. D. Watson's *The Double Helix*: yes, that is both history and sociology of science) than interdisciplinary gaps.

In fact, coverage must be the prime concern. Does it guide us to all the major bodies of literature which might be relevant to those vexing value issues? I fear not. The "technology", for example, is almost exclusively civilian: who cannot see the history, the ethics and the politics of scientific warfare as integral to our "culture"? How little is said of another vast tract of desperate value issues: science (and so forth) in the Third World.

Education is scarcely mentioned, and no interest is taken in economics. Science fiction, which deserves a good 20 or 30 pages for its philosophical and sociological provocations, gets on ill-informed basic. One may forgive conventional scholars for blind spots towards particular margins, but not for such blotchy vision in the focal areas.

The contributors are, however, more perceptive about their chosen fields. Alex Michalos, for example, gives an excellent survey of the conventional problems of the philosophy of science, fully confirming my suspicion that most of them are no more "soluble" by logical analysis than squaring the circle by ruler and compass. He also deals fairly with phenomenology, existentialism, and other un-Anglo-Saxon attitudes. But others take more provincial stances. The medical chapters refer almost exclusively to American conditions and experience, as if the British National Health Service were an unmentionable dirty joke. The chapter on the sociology of science is snobbishly "sociological", dogmatically functionalist, and slavishly Mertonian. British readers, with access to other sources and influenced by other intellectual traditions, need not be deceived: it is precisely the American school, for whom this guide has been lovingly conceived, who will be misled by such tunnel vision.

Some fields, such as the history and philosophy of technology, are not centred on old-timed disciplines. To cover this embarrassment, their expositors try to take a more eclectic line than the literature warrants, often at the expense of the honest scientist or engineer turned amateur historian or philosopher. One must surely get at the hard facts, however insensitively chronicled in biographies and autobiographies, before pretending to evaluate them. This dialectical opposition between "internal" and "external" viewpoints — between "scientists" and "metascientists" — runs through the whole of this book and is seldom resolved in a higher synthesis. As Michalos puts it: "Scientifically oriented philosophers complain that what the other side is doing has nothing to do with science, while philosophically oriented philosophers complain that what the other side is doing has nothing to do with philosophy." However, these two orientations are contributors to a rather stock of literature to the philosophy of science than either could have contri-

buted alone. For "science" substitute "technology" or "medicine", for "philosophy" substitute "history" or "sociology": this proposition, which is valid in all possible combinations and permutations, is largely ignored by some of the other authors. Attitudes towards this or that style of thought are mere opinion and easy enough to detect and discount. Treat this work simply as a catalogue raisonné: it is complete in detail within its evident limits. Alas, no. Major items are missing. Where is Michael Polanyi's *Personal Knowledge* which I put alongside Kuhn, Merton and Popper at the very top of books about science? Horace Freeland Judson's monumental history of molecular biology, *The Eighth Day of Creation*, cannot have been too recent to be included. *Lawrence and Oppenheimer* by Paul Phor Davis is indispensable on the science of its period. Frank Sulloway's demythologizing of Freud gets into the history of science but not of medicine. John Passmore's *Science and Its Critics* is surely worth recommending. The *Bulletin of the Atomic Scientists* is almost the only regular journal of coolly argued liberal concern about social responsibility in science. These are just a few very obvious gaps indicative of many more that experts in each field would immediately notice.

Finally, consider it the other way round, as a possible source of information about a particular or specific topic. Look it up in the index. Some book titles are indexed literally (*What Is Cybernetics* comes under W), but not all are included. Some names in the text are missing from the index (advice to authors and editors: be sure that the names of potential reviewers do not suffer this fate). There are few pointers to significant minor topics. One wants to look up a book on Nobel prizes: you must already know that the key entry is "Zuckerman, Harriet A."). Because the subject is important, and there is nothing else quite like it, this book should probably earn its keep on the reference shelf of an institutional library. But it has elementary deficiencies, in the large and in detail, which ought to have been noted and overcome by the distinguished team of authors and editors who claim responsibility for it.

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China syndromes

Nuclear Power and Public Policy: the social and ethical problems of fission technology
by K. S. Shrader-Frechette
D. Reidel, \$19.95 and \$10.50
ISBN 90 277 1054 6 and 080 5

Nuclear Power Decisions: British politics, 1953-78
by Roger Williams
Croom Helm, \$19.95
ISBN 0 7099 0265 4

Both of these books are about the quality of public decision-making on civil nuclear power. From his standpoint as a political scientist and science historian, Roger Williams examines British decisions from Calder Hall in 1953 to the Windscale Enquiry in 1978. From her standpoint as a moral philosopher, Ms Shrader-Frechette examines the logic of arguments concerning the acceptability of various kinds of nuclear risks. Despite their different points of departure, both authors arrive at similar conclusions. Roger Williams recommends more public accountability and Ms Shrader-Frechette argues for more democratic and, by implication, less technocratic decision-making.

In a series of essays, Ms Shrader-Frechette subjects old controversies to ethical analysis, exposing many fallacies on the way. Her first target is the claim that nuclear power carries fewer environmental risks than coal-fired electricity generation. This would be valid only if methods permanently to isolate radioactive waste had been perfected or if it were morally right to ignore the risks imposed upon future generations.

Her second concern is the risk of core-melt in light water reactors. Here she diagnoses a flaw in United States Federal policy towards insurance against serious reactor accidents. She finds that the controversial Price-Anderson act rests upon two mutually inconsistent propositions: that nuclear reactors are safe and that liability for serious reactor accidents should be limited.

Third, she exposes the limitations of technology assessment and cost-benefit analysis, which are deficient in their treatment of "externalities" concerned with the nuclear fuel cycle. There can be no equitable compensation for radiation-caused injuries, she argues, because the nature of radiation-related "externalities" precludes the certain identification of the injuries.

In her final essay Ms Shrader-Frechette dwells on the old conflict between equity and efficiency, arguing that technology assessments should embrace questions concerning the moral acceptability as well as the magnitude of the risks. That the risks associated with a particular technology may be smaller than other risks, which are considered as "normal", does not, of itself, constitute reason for accepting new risks. She believes that as long as science-related public policy judgments are left to technical experts, higher priority will be given to technocratic considerations such as meeting economic demand and promoting economic growth than to the ethical considerations of social desirability and preserving basic rights. She concludes with an appeal for Plato's "philosopher king", arguing that only by placing philosophical considerations at the centre of decision-making can public policies be both socially and scientifically sound.

Together with the earlier classics by Margaret Gowing and Duncan Burn, Roger Williams' book is essential reading for anyone intent upon understanding the history of British nuclear decision-making. Scholarly and eminently readable, it is especially good on the "private" politics, the institutional rivalries and the personal conflicts during the era of closed decision-making, which ended with the reactor choice debate of 1973-74.

In all important respects, Williams confirms Burn's findings about the 1965 appraisal of the advanced gas-cooled reactor (AGR) from which the commercially unified AGR design, incorporating a novel 36-rad fuel element involving massive scaling-up and inadequate development work — emerged triumphant over American light water reactors.

The weakest controversy was awarded the contract for Dungeness B — which, 16 years later, is still not operational — and further orders were placed with the other two consortia. Thus, three separate ver-

sions of an untried basic design were put to construction in rapid succession. As each ran into difficulties, little learning could be transferred between the consortia. The result has been appalling delay and economic costs.

As the AGR disaster unfolded, so political confidence in the institutions responsible for the 1965 appraisal, in 1974 the CEBG proposed switching to a 1250 MW Westinghouse Pressurized Water Reactor (PWR), claiming that, unlike the AGR, the PWR was commercially proven. Neither the Select Committee on Science and Technology nor the Government accepted the CEBG's proposal partly because the programme commitment was so large (45 GW) and partly because there was no operating experience of such a large PWR.

Those who remember the debates over the proposed thermal reactor and fast breeder reactor programmes proposed respectively by the CEBG and the UK Atomic Energy Authority in the period 1974-77 will have a sense of déjà-vu when they read Williams' account of the background of the first (Magnox) programme 1953-57 — predictions of energy gaps, undid confidence in the technology and an expected harvest of export orders.

Unpersuaded by the CEBG's PWR proposal, and unwilling to risk ordering further AGRs, in 1974 the government turned to heavy water reactors. But instead of choosing CANDU, which was developed, and commercialized through consistent efforts by the Canadian — in Government consulted the Nuclear Energy Board and chose the San Generating Heavy Water Reactor (SHWR). After two years' negotiation, the SHWR was abandoned in late-1976 on UKAEA advice.

The roots of the SHWR episode can be traced to 1963 when, as Williams shows, the CEBG were seeing CANDU as a potential successor to Magnox and an alternative to the AGR. One of UKAEA received government backing for the prototype SHWR at Windscale, the design was effectively closed to licensing CANDU for the 1965 decision — as it turned out, for the 1974 decision too. As in 1965, the CEBG was deluged in 1974 with an inadequately developed home-grown technology. Because the SHWRs were built, the economic cost were incomparably smaller than those of the AGR disaster. The main effect was a further weakening of confidence in the institutions involved and that no further serious thought was given to building CANDUs despite their continuing outstanding performance in Canada.

The sequel to the SHWR episode was the 1979 Government authorized new AGRs at Heysham and Sizewell at an estimated cost of £2,600m, authorized the licensing for a PWR at Sellafield and announced a 15 GW programme. These decisions were meant to bring to a halt the PWR option, to keep AGR technology alive and to establish the PWR option, subject to safety vetting by the Nuclear Installations Inspectorate and public inquiry on the general and site-related issues of the PWR plant at Sellafield. Ordering at a rate of one per year, as envisaged by the government, would take United Kingdom nuclear capacity to 22 GW by the year 2000 — one-fifth of the level predicted by the UKAEA in 1976 in evidence to the Royal Commission on Environmental Pollution in support of the proposed demonstration 1300 MW fast breeder reactor.

The only pity with these two books is that the authors stop short of offering practical advice, as the related issues of promoting public accountability and democratizing decision-making procedures have been under debate for several years. Ms Shrader-Frechette is right to highlight the basic conflict between equity and efficiency. But Roger Williams' admirable book shows that Britain has had the worst of both worlds in its civil nuclear endeavours: closed decision-making and inadequate development work — emerged triumphant over American light water reactors.

The weakest controversy was awarded the contract for Dungeness B — which, 16 years later, is still not operational — and further orders were placed with the other two consortia. Thus, three separate ver-

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Freedom of the individual

Mill on Liberty
by C. L. Ten
Clarendon Press: Oxford University Press, £12.00 and \$4.95
ISBN 0 19 824643 9 and 824644 7

Should a euthanasia society be free to give advice to postal applicants, depressed mothers included, on how to kill themselves? Should the National Front be free to march through Britain saying Britain would be better without blacks, or through Golders Green saying it would be better without Jews?

If Guy L. Ten wants to be able to escape any residual shame about his sexuality by performing the very acts themselves on Saturday afternoons in Hyde Park, with the public on hand, why should they be stopped? Should a journalist be free to go across the message, taken by most of us to be false, that the British Army in Ulster is in systematic collusion with Protestant killers?

Should the protestors of great private wealth in our society be secure from that ancient threat, real socialist redistribution?

John Stuart Mill's essay of 1859, *On Liberty*, is renowned as the liberal answer to such questions of individual freedom. But what does it say? Mill was grandly eloquent on the particular subject of freedom of speech. "If all mankind minus one were of one opinion, and only one person were of the contrary opinion, mankind would be no more justified in silencing that person, than he, if he had the power, would be justified in silencing mankind." He gave about a dozen alternative statements of his more general principle of liberty, his "one very simple principle".

He succeeded, in keeping his clear and satisfactory idea of it, if any, pretty much to himself. What is often said is that Mill's principle is that the state and society cannot rightly interfere in the life of an individual against his will unless he harms or threatens harm to another, perhaps by omission, except an agreeing partner. It matters not at all if the individual is behaving immorally or inhumanly in the view of society and state, or in an individually self-hurting or self-destructive way. What can be called moralism is not, as so is paternalism. In consequence, it is to be absolute freedom to express what one so long as its expression does not constitute an offence, where the latter consists in instigating action then and

there, as when an orator inflames a crowd to attack people or property. One great difficulty with this package is that it certainly appears to be inconsistent. Might great harm not ensue later from certain non-instigating expressions of opinion? Another difficulty with the package, unnoticed by some of Mill's critics, is that Mill himself disavows it. He specifically says that it does not adequately express his principle.

Many have tried to decide what Mill's principle might be by concentrating on his avowed that it derives from a superior principle, the Principle of Utility or the "Greatest Happiness Principle". The cause is that he does not specify his understanding of the principle either. He does not accept it in its classical form: he chooses the possible action or policy which is likely to produce the greatest balance of satisfaction over dissatisfaction, taking into account everyone affected.

Mill does say, however, that his Utilitarian principle has to do with "the permanent interests of man as a progressive being", and Mr Ten in his admirable book puts an awful lot of weight on this, as he does on Mill's praise of individual self-development. The result is that he takes Mill to have indulged in loose talk, and finds him in fact not to have been a real Utilitarian — barely even a pretend-Utilitarian. He presents him as more committed to individuality and hence liberty than to totals of satisfaction. Better an individual dissatisfied than a conformist satisfied.

The resulting doctrine about state intervention has two distinctive parts. There is to be a possibility of intervention only if an individual infringes certain basic rules of societies, which have to do with "the physical integrity of the person, respecting property, and . . . promises and contracts". There is to be no intervention if one individual causes that particular kind of harm to another, if it can be called such, which also depends for its existence on the moral beliefs and attitudes of the person harmed. Those who play football on Sundays cause this kind of harm to the distressed Sabbatharian.

I take it that Mr Ten's Mill (with whom Mr Ten agrees) would demand that the euthanasia society be allowed to go about its dismal business. As for the non-instigating National Front, it is to be allowed to march if the result is only distress which also depends on certain beliefs and attitudes of those distressed, but not on its instigating action then and

there, as when an orator inflames a crowd to attack people or property. One great difficulty with this package is that it certainly appears to be inconsistent. Might great harm not ensue later from certain non-instigating expressions of opinion? Another difficulty with the package, unnoticed by some of Mill's critics, is that Mill himself disavows it. He specifically says that it does not adequately express his principle.

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Ramsey and the nature of truth

Prospects for Pragmatism: essays in memory of F. P. Ramsey
edited by D. H. Mellor
Cambridge University Press, £15.00
ISBN 0 521 22548 5

Frank Ramsey, who died in 1930 at the age of 26, was a Cambridge mathematician whose writings on formal logic, philosophy and economics have been twice reprinted since his death, once in 1931 and again in 1978. Although they amount to less than 300 pages they represent some of the most penetratingly influential writings in philosophy of the last hundred years. *Prospects for Pragmatism* is a tribute to that influence, containing 11 essays by British, American and Polish philosophers on the topics of Ramsey's principal interests — knowledge, belief and their objects; probability and the philosophy of science.

The title of the book reflects an interest in pragmatism as a tendency in philosophical thinking which has been growing in recent years, due largely to the work of the American philosopher W. V. Quine. But Dr Mellor, the editor of this book, reminds us that Ramsey called himself a pragmatist. "The essence of pragmatism", he said, "I take to be this, that the meaning of a sentence is to be defined by reference to the actions to which asserting it would lead, or more simply still, by its possible causes and effects. Of this I feel certain, but of nothing more definite."

Most of the contributors to this book seem to favour the now fashionable approach, in questions of meaning through the methods of formal semantics. This discipline, which is subtending the invention of the late Rudolf Carnap (himself no pragmatist) whose introduction to

Semantics met with little more than respectful puzzlement when it was published in 1941. It is reassuring to know that the insights of that great logician are now being developed into a contemporary orthodoxy.

Ramsey's own writing is spare and suggestive rather than full of detailed argument, so it is not easy to see exactly what pragmatism meant for him, especially as he says "my pragmatism is derived from Mr Russell" — of all people! Moreover, the essay published as an epilogue in *Prospects for Pragmatism*, shows him more as a logical positivist than as a pragmatist, if we have to label him at all. This paper, originally read to a Cambridge discussion group, comes to the conclusion that "there is really nothing to discuss", all the traditional topics of discussion having been shown by the advance of science and philosophy to be "either technical or ridiculous".

However, Ramsey's pragmatism, as Dr Mellor points out, "rests on belief: its nature, its laws, its degrees and its objects", and the contributors have consequently directed their attention largely to these matters. The 11 essays are of a uniformly high standard though some devote themselves more specifically to Ramsey's work while others deal more independently with topics of general Ramseyan interest. Papers that I consider to be of particular value and interest are those by Susan Haack, D. H. Mellor and L. J. Cohen.

Dr Haack discusses the question of degrees of truth, which is raised by the fact that "false" is clearly a matter of degree: whereas truth is ordinarily supposed, except by devotees of Hegel, to be an all-or-nothing predicate. Dr Haack considers some recent versions of the

degrees of truth thesis based on the notion of "fuzzy sets" and the corresponding "fuzzy predicates", and some arguments to the effect that falsehood is a matter of degree whereas truth is not. She ends with a discussion of the relevance of these questions to Ramsey's "redundancy" theory of truth which asserts that "P is true" means no more than "P".

Miller discusses how a disjunctive theory of belief, such as Ramsey's, can cope with the question: "How can I be aware that I believe P?" and goes on to link this question with the notion of subjective probability considered as a measure of the strength of belief. Cohen writes about the distinction between laws of nature, and accidentally true generalizations in the context of Ramsey's two (apparently inconsistent) accounts of causal laws. His second preferred account of a causal law as a rule for judging, for example, that all cases of P are also cases of Q) was possibly original with Ramsey but has also been proposed by some logical positivists — Moritz Schlick, for example. Cohen points to defects in this account and goes on to discuss how it must be amended to allow for the counterfactual statements that can be inferred from genuinely causal laws.

The book is very well planned and edited, an important collection of papers in Ramsey's fields of interest and a worthy memorial to the philosopher who, but for his sadly premature death, would now surely be regarded as the equal of Russell or Popper among the philosophers of the present century.

D. J. O'Connor

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Fooling oneself

A Study of Self-Deception
by M. R. Haight
Harvester Wheatsheaf, £16.95
ISBN 0 85527 918 4

M. R. Haight in this well-argued and cogent book tells us that self-deception is an important aspect of behaviour which has not been adequately dealt with by philosophers. And she believes that the problems and paradoxes this concept gives rise to are of some philosophical consequence. If we can deceive ourselves successfully then this must affect our theories of knowledge, belief, personal identity, action and ethics. Self-deception then plays its part in clouding our judgment about ourselves, others and the world around us.

Much of her book is taken up with a critical examination of three theories of self-deception: those of Freud, Sartre and Fingarette, and she makes some perceptive comments on their views. She also examines a range of individual case studies of self-deception, autobiographical, clinical and fictional. These throw considerable light on self-deception as a feature of our everyday life, and she handles this material with skill, insight and sympathy.

Her examples include the cynicist who tends to neglect the possible disastrous consequences of his, his discoveries in nuclear physics, and the cancer patient who tries to rationalize away the unpleasant fact of his illness. I am, however, a little doubtful about some of the cases of multiple personality she quotes from psychopathology in support of her argument. She goes on to ask, why should it be necessary to use such a self-contradictory concept in any account of behaviour? In the case of the self-deceiver who is refusing to admit what he is trying to do, she thinks that what is at issue is a kind of epistemological consistency. This enables him to fit in with how he wants to behave and wants others to treat him.

The difference between Haight's and Sartre's views on self-deception is brought out when she tells us, "responsibility may be an illusion I am bound to say that I think it probably is. If so, Mr Ten and his Mill, I am pretty sure, are against any suppression of the journal's proposition about the British Army. That is all to the good. As for wealth redistribution, they take it that their principle is silent and neutral on the matter. Another Mill therefore comes to mind, the one who declares at the end of *On Liberty* that the state must never try to help people, as distinct from save them from harm. Giving them things ruins their character, because the number of bureaucrats, and so on. No National Health Service here, thank you.

Mr Ten's book is remarkably clear and in many ways a model piece of political philosophy. Very many views of Mill are lucidly discussed. (The punning of Lord Devlin, for his *The Enforcement of Morals*, is vigorously contested with it, but, despite disagreement with it, I support, despite disagreement with it, that this is the best book available on *On Liberty*.)

Ted Honderich

Ted Honderich is reader in philosophy at University College London.

knowledge obviously does not make people responsible for what they do" (page 149). Curiously enough Sartre would agree with the last part of this statement. Reflective knowledge, he would say, about some specific action, such as depressing the lever which released the atom bomb on Hiroshima, usually occurs after we have performed the task. But this does not for Sartre mean that we are not responsible.

Haight with Sartre's concept of freedom in mind had a little earlier remarked, "there is nothing in the idea of consciousness that suggests that one might not take over a conscious being's body and run it like a machine, determining even his thoughts by determining his brain — while he stayed conscious" (page 149).

For Sartre, however, human action is always intentional: unless even that of a machine has this character vicariously when used by us as an instrument. The view that a machine might take over control of our bodies is strangely reminiscent of medieval demoniacal possession, and does seem to assume a "ghost in the machine" theory of body-mind. Sartre would distinguish sharply between our first-person experience, where we are aware of our selves as free agents acting through our lived bodies, and a third-person account of the body and behaviour as it appears to others, which might be described in causal terms. The former type of experience is only illusory if we take it as reducible to the causal account. And for Sartre the paradigm of bad faith is psychological determinism.

As a study of the individual pathology of self-deception Haight's book has much to commend it. But it would also have been instructive to have considered the genealogy of this concept with its ontological concern for the human condition. Hegel, Foucault and Marx discuss the question in their different ways under the form of alienation and false consciousness. Kierkegaard finds the self-deceiver in dread, and quotes Socrates saying in the *Cratylus* that it is dreadful to be deceived by oneself, because one always has the deceiver with one.

Wolfe Mays

Dr Mays is visiting fellow at the Institute of Advanced Studies, Manchester Polytechnic.

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Condensed view of life

Environmental Biology
by E. J. W. Barrington
Edward Arnold, £5.95
ISBN 0 7131 2788 0

In this fourth in a series currently being published by Edward Arnold on environmental problems and natural resources, Professor Barrington has undertaken the task of providing an introduction to biology, aimed at a readership with little or no prior knowledge of the subject. Modern biology in all its aspects is extremely broad to condense it, without losing a sense of underlying principles, into a short introductory text of just over 200 pages, is a formidable task, but Professor Barrington has done justice to the problem.

In the introductory chapter, the author discusses the chemical basis of life, the structure of the cell, and the way it functions. Cells are not inert; they metabolize and grow, accordingly the next chapter deals with the question of how energy is made available to support these processes. Here is provided a painless introduction to the intricacies of intermediary metabolism,

which has been skillfully interwoven with an account of prebiotic systems and the origin of life. One does not usually think of glycolysis as being one of the oldest metabolic pathways in existence, but its importance as an energy yielding device in the anaerobic environment of primeval times is clearly explained.

The book then deals with the interrelationships of organisms — the primary producers, consumers and decomposers — in terms of their physiology, the energy flow and the nutrients cycling between them. The discussion is concise and up to date: the section on nitrogen fixation, for example, incorporates findings that have been published during the past five years. In contrast, therefore, it is a little disappointing to find the old view of prokaryotes still expressed, that they are "presumably related to green plants", although it may be preferable to regard them as "a separate group" (page 15). Most microbiologists would nowadays disagree with the emphasis of that statement. Concluding evidence amassed over the years has shown that prokaryotic cells differ so much in organization and metabolism from plant, animal and fungal cells alike that they constitute a completely separate group; and to view of the metabolic importance of prokaryotes, rather more prominence could perhaps have been given to prokaryotic cell structure.

The book continues with an account of respiration, water and salt balance and thermal balance, discussing the ways in which different organisms have adapted themselves to solving the problems posed by aquatic and terrestrial environments. The final chapters on reproduction and the life histories of organisms have evolved in response to the conditions imposed by their way of life and habitat.

A further chapter deals with physical and neural communication at both the cellular and organismal level, showing how these processes are important in integrating function both within the organism and at the community level. The final chapter offers an outline classification of living organisms, an introduction to the familiar hierarchical system of natural classification, which is useful but which curiously omits any mention of genus or species. The book ends with a valuable list of references — some 50 standard texts which the reader can consult for further information on all of the topics covered.

Taken as a whole, the text is a pleasure to read. The account is accurate; the style is clear and economical, packed with useful information and points of comparison; and the author is punctilious in defining biological terms as he introduces them. There is a pleasing absence of dogmatic statements, and the author repeatedly states: "what every practising biologist knows, that in biology it is dangerous to make sweeping generalizations; to every rule there is an exception."

It must be said, however, that several of the figures, particularly those depicting chemical formulae, do not do justice to the text. Within the first eight pages the reader is treated to several different versions of Haworth projection formulae for sugars. An introductory text it would have been preferable to keep to one. Elsewhere there are missing bonds, arrows for reactions that lead nowhere, extraneous atoms, missing substit

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C.L. Ten

This detailed and sympathetic, but not uncritical, study of *On Liberty* argues for the general consistency and coherence of Mill's defence of individual liberty, but maintains that there are significant non-utilitarian elements in his arguments. These elements are identified, and the foundations of Millian liberalism are subjected to fresh analysis. £12 paper covers £4.95

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Divine Commands and Morality

Edited by Paul Helm

This collection of recent writings covers the question of the relation between morality and religion. The contributors are Robert Merrihew Adams, Baruch A. Brody, W. Frankena, Peter Geach, Nelson Pike, Dewi S. Phillips, Philip L. Quinn, James Rachels, R.G. Swinburne, Bernard Williams, and Robert Young. Paper covers £3.50 Oxford Readings in Philosophy

Oxford University Press

GNYS AT WRK

GNYS AT WRK A Child Learns to Write and Read
Glenda L. Bissex

The "genius" at work here is the author's son Paul. How his writing ability develops and its relation to his growing facility for reading, is what this remarkable study is all about. Bissex has given us the first in-depth account of normal literacy development and, with it, a unique, detailed account of the "genius" that is, quite simply, the human capacity for language. January, £10.50.

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Gareth B. Matthews

Matthews demonstrates that children have a capacity for puzzlement and mental play that leads them to tackle many of the classic problems of knowledge, value and existence that have traditionally formed the core of philosophical thought. He suggests that adults have much to gain if they can learn to "do philosophy" with children. January £6.00

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Sex and violence

Ethics Teaching in Higher Education
edited by Daniel Callahan and Sissela Bok
Pleum, £11.34
ISBN 0 306 40522 9

As traditionally understood in British Universities, ethics means moral philosophy; and moral philosophy has meant, primarily, the meaning and justification of moral judgments. Concrete moral issues appeared, if at all, only as illustrations: you were not expected to look at the arguments pro and con, much less take sides. But the result of the impact of student unrest and the Vietnam war on American academic life has been a welcome resurgence of interest in moral problems, and courses dealing with abortion and adultery, terrorism and torture, are now offered even on many British campuses.

These "sex and violence" courses, as they are known in the trade, have their nineteenth-century predecessors, in America at least, though their concerns were then more with "drunkenness and divorce". And, to judge from Douglas Sloan's historical survey which opens this collection from the Hastings Center Project on the Teaching of Ethics, they were even more practical. One teacher managed to devote two or three months to "nothing but hygiene", in the hope of infecting his students "with real love of virtue and a deep aversion to every sin against the body".

There are, then, at least three things that might under the heading of ethics teaching in higher education - moral theory, moral problems, moral training - and the failure to separate them lends some uncertainty to this volume. There are, of course, major issues concerning the relative importance and merit of these three forms of ethics teaching, questions of how far philosophers, or anyone else, ought to be teaching morality as such, as part of a state system of higher education. But the contributors pass each other by, drawing the obvious conclusions from their particular assumptions, but never joining issue, or even, for the most part, noticing the

differences between them.

Those contributors who are philosophers appear, naturally enough, to be talking about courses in traditional moral philosophy; a psychologist, on the other hand, talks equally naturally about ways of encouraging moral development, not at all the same thing. How many ethics teachers in this country, one wonders, would recognize a set of goals which includes such things as "eliciting a sense of moral obligation and personal responsibility"? Perhaps they should, but that is the question that needs asking. And the problem of indoctrination, for example, will take on very different forms, depending on how you answer it.

The authors seem as uncertain about their audience as they do about their topic. Most of the essays give the impression of having been written more to fill a gap identified by someone else, than from any personal conviction on the part of the author. A sentence chosen at random - "The evidence must be interpreted, weighed and analysed, and there are no hard and fast rules for carrying out these complex tasks" - will stand for most, in telling us nothing that we want or need to know.

So any merit possessed by the lacklustre volume will be due to individual papers. Sloan's historical survey is both fascinating and comprehensive. Thomas Likoos provides a useful introduction to some issues in the psychology of morals. Susan Resneck Parr writes interestingly on the attempts of some teachers to introduce moral issues into their literature and history courses - and the incoherence of some of their students. Finally there are, for no very obvious reason, two essays on specific moral topics: a pedestrian discussion of paternalism by Dennis Thompson, and a more spirited look by Sissela Bok at the question of whistle-blowing, about which there needs to be much more, both in word and in deed.

Don Locke

Don Locke is professor of philosophy at the University of Warwick.

Medieval certainties

Conscience in Medieval Philosophy
by Timothy C. Potts
Cambridge University Press, £10.50
ISBN 0 521 23287 3

The problem of conscience is one of the more intractable philosophical problems. It lies, as Mr Potts says, in both mental and moral philosophy, and it seems a prime candidate for ethical and social relativism in an age where there are no absolutes. The Middle Ages did not suffer from these disabilities. There was a much simpler view of philosophy, and the boundaries between speculative, practical and physical knowledge were meant to be crossed as parts of an integrated whole. There was a common framework of Christian doctrine which constituted the moral law and a correspondingly defined notion of man in the scheme of things. And in Augustine's doctrine of inner illumination medieval thinkers were bequeathed a justification, for epistemological and moral certainty. There was a place waiting for conscience in such an outlook, although it was not formally taken until the thirteenth century, the great century of systematization.

Mr Potts's book consists of translations from the writings of medieval theologians on conscience. They are Jerome, Augustine, Peter Lombard, Philip the Chancellor, Bonaventure and Aquinas. The first three provided some of the sources from which the formal discussions of the latter three developed. As Mr Potts acknowledges, Augustine's doctrine of conscience was not confined to those three, nor, he might have added, were the sources. If Philip the Chancellor was the first formal treatise on the subject, Bonaventure was perhaps the clearest exponent of Augustine's theory of illumination, and it is significant, though understandable in the context of Mr Potts's book, that a more enlightening text from Augustine could not have been included either from his book on the Trinity or from that on the Free Choice of the Will. As they stand, though, these three provide as good a point of departure as any both for the medieval philosophical approach and for different individual approaches to the problem. These are analysed in Mr Potts's thoroughgoing essay which combines a brief historical setting with a formal discussion of

the arguments of each thinker. On the whole, he rides his two different mounts successfully, though, inevitably in the limited space available, he is not able to provide very much of a philosophical setting for medieval ethical theory, especially its development in the twelfth century. Many of the arguments and some of the examples employed by these thinkers, such as those of Aquinas on acting on mistaken beliefs, went back to Abelard whose theory of consent as the criterion of moral actions set off a chain-reaction of ethical discussion in the twelfth century.

Mr Potts has no difficulty in pointing to the weakness of his different subjects. Primary among them was the tendency to mix psychology and logic and a hazy notion of what gave a proposition deontic force. There was also a dependence on Aristotle's classifications between speculative and practical knowledge, and reason and appetite, which, in Bonaventure's case, got in the way. Substantively the greatest difference from the present was the assumption of a genetically fixed human type independent of environment or culture that made no allowance for the almost indefinite range of psychic and emotional variations in which we today are so preoccupied.

Mr Potts's book consists of translations from the writings of medieval theologians on conscience. They are Jerome, Augustine, Peter Lombard, Philip the Chancellor, Bonaventure and Aquinas. The first three provided some of the sources from which the formal discussions of the latter three developed. As Mr Potts acknowledges, Augustine's doctrine of conscience was not confined to those three, nor, he might have added, were the sources. If Philip the Chancellor was the first formal treatise on the subject, Bonaventure was perhaps the clearest exponent of Augustine's theory of illumination, and it is significant, though understandable in the context of Mr Potts's book, that a more enlightening text from Augustine could not have been included either from his book on the Trinity or from that on the Free Choice of the Will. As they stand, though, these three provide as good a point of departure as any both for the medieval philosophical approach and for different individual approaches to the problem. These are analysed in Mr Potts's thoroughgoing essay which combines a brief historical setting with a formal discussion of

Gordon Leff

Gordon Leff is professor of history at the University of York.

Decisions

Reasoning and the Explanation of Actions
by David Milligan
Harvester Press, £18.95
ISBN 0 85527 433 6

The explanation of action has been one of the most debated topics of recent philosophy, and a massive, and often rather technical literature has grown up around it. It is easy to see why. We want to understand how our tendency to explain actions in terms of the motives, or intentions, or beliefs, thoughts and desires of an agent, can be seen as consistent with our scientific view of ourselves as very complicated physiological lumps, behaving in accordance with whatever laws govern such lumps. Resolving this tension should have fundamental consequences for our image of ourselves as (sometimes) self-controlled, rational, or even free, and only by understanding this can we see how far persons, in their psychological and social aspects, are possible subjects for scientific understanding. The technicalities tend to arise when we attempt a detailed comparison of psychological and scientific explanations, and the various constraints that govern attempts to provide such explanations.

David Milligan's pleasant, readable book does not attempt to develop a general theory of explanation, or to follow through any new theory of these difficult matters. His view is that "we can only understand the way explanations function by looking at the ways in which action come to be performed". To help us look, he gives us a rather generous helping of little episodes, in which people consider whether to give up smoking, the choice between London to Cambridge, decide to plan out tomatoes, and so on. Indeed his name lists some fifty such examples, which gives a volume of 194 pages something of the appearance of a script for *Mr Deeds*.

Not all action is preceded by deliberation, as Mr Milligan is aware, but the majority of his cases illustrate people deliberating what to do, and the question is whether these reminders of what deliberation is like serve an interesting philosophical purpose.

When deliberating we try to think of salient features of the decision to be made, we weigh them up, or "evaluate" them, and in the light of these considerations we may find that one decision is indicated, or required, or we may just find ourselves making it. Mr Milligan has a number of negative points to make about such processes of thought: they do not conform to a deductive pattern, do not require any special premises to turn them into valid arguments, do not betray any standard logical forms, do not characteristically involve applying principles and rules. More positively, they involve reasoning, can be criticized, can be in a rather dilute sense badly done, in the ability of a place of deliberation to "withstand criticism". As agent's evaluations of factors in a decision dictate his reasoning, but to prevent one forget some factors, fail to perceive connections between them, or be unable to deal with the complexity of a case.

These conclusions are modest enough, and it is hard to believe that any philosophers have intended to contradict them. Mr Milligan sees himself as attacking a "Humanist" view, in which decisions would consist in making deductions, in applying our knowledge of the world to a course of trying to best satisfy our desires, given wants. But I doubt if Humanists hold any opinion about desire, belief or action which is inconsistent with the outline phenomenon of deliberation. The best person descendant of Hume would be the one whose decision-making is well modelled in terms of subjective probabilities and utilities, and this may well be true regardless of whether the agent uses the formal apparatus of such a theory in his conscious thought. Arguing otherwise is like saying that because don't recognize meanings of sentences he cannot deduce that the sky is blue. The more convincing it is, the more it engaged the question of the propriety of formal reconstructions of psychological processes.

Simon Blackburn

Simon Blackburn is a Fellow of Trinity College, Oxford.

NOTICE BOARD

Appointments

Bradford
Pro-vice-chancellor: Professor V. Walker; Professor F. M. Willis (re-appointment); Senior lecturer: Dr A. P. Muhlmann (production management); Research fellow: Dr M. Gines (electrical engineering)

Oxford
Saram lecturer: Henry Chadwick (academic year 1982-3)

Newcastle upon Tyne
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Queen's Belfast
Lecturers: John Davis (agricultural economics); John Ruth Lelch and John Quinn (medicine education); David M. G. McSherry (medical computing in department of medical statistics); Patricia Eleanor Watson, Robert A. Randall, Norman Albert Whittaker (business studies); Joseph Malachy McElweeney (town and country planning); Miles Roger Wislang (anatomy); Peter Michael Carruthers and Brian Jack Copeland (philosophy); John David Brewer (social studies); Timothy Andrew Unwin (French); James Charles McElroy (pharmacy); Richard A. Wilson and Vincent Goughan (political science); Charles G. Cowan (dental surgery); George E. Bennett (social work); Conformation of titles: Dr I. C. McDade (Research fellow in the department of pure and applied physics); Dr J. A. Kernaghan (honorary senior research fellow in the department of pure and applied physics); A. R. Edwards (honorary senior research fellow in the paleontology centre); Dr J. C. Nogueira (honorary research fellow in the department of pure and applied physics); William A. Patterson (registered research worker in the department of civil engineering)

Wales
Reader: Dr B. W. Staddon (zoology, University College, Cardiff); Dr G. D. Stafford (restorative dentistry, Welsh National School of Medicine)

The Royal College of Surgeons
Faculty of anaesthetics: Dr J. F. Nunn re-elected dean for the year from June 1981 and Professor C. Campbell elected vice dean. Dr Robert Epstein of Connecticut, USA and Professor Kaminski of Warsaw, Dr Ronald Katz, Los Angeles and Professor van Spierdijk of Leiden, were elected fellows of the faculty.

Mr J. R. S. Morris, chairman of Brown and Root UK, has been appointed to the Advisory Board for the Research Councils until December 1981

Language at Work is the latest edition of the DES and Welsh Office booklet which looks at a variety of post school courses designed to help young people interested in languages to make the most of the career opportunities available. The courses covered range from Business Education Council national certificates and diplomas to degree level and beyond available at colleges, polytechnics and universities. (Available free)

Government Statistics: A brief Guide to Sources the 1981 edition is designed to help organisations make use of Government statistics together with information from other sources to help in broad strategic planning and in day-to-day decision taking. (Available from the Central Statistical Office, Great George Street, London SW1)

A Researcher's Guide to British Film and Television Collections has been produced by the British Universities Film Council Ltd. The guide is designed to document the existence of film and television records in Great Britain which are not readily available for viewing outside the premises in which they are held. The subjects covered range from the television coverage of General Elections to films of early motoring enthusiasts. Contents include: "Film Research: the National Film Archive", "Copyright in Films" and "Postgraduate Academic Film Research". (£12.50 or £13.50 overseas. Special price £7.50 available only to members of staff of BUFCC member institutions and students from BUFCC.

Open University programmes April 4 to April 10

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7.00 **7.00** Technology foundation course: Electric Motor (T101) (prog 5).
8.00 **8.00** Science foundation course: Spreading Ocean (S101) (prog 7).
9.00 **9.00** Science foundation course: Penetration and Graphs (M101) (prog 7).
10.00 **10.00** Making sense of society: Analyzing Social Research (S201) (prog 1).
11.00 **11.00** Risk: "The Gambler", Doctory (U201) (prog 1).
12.00 **12.00** An introduction to sociology: Sexuality and Life History (S201) (prog 1).
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14.00 **14.00** The digital computer: Using Open 1 (T201) (prog 1).
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Tuesday April 7

7.00 **7.00** History: Britain and the world: History (S201) (prog 1).
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42.00 **42.00**

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Tel. 01-837 1234.

Index

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Appointments vacant:
Universities

Polytechnics
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Colleges and Institutes of
Technology
Colleges with Teacher
Education
Colleges of Further
Education

Colleges and Institutes of
Higher Education
Colleges and Departments of
Art
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Friday in the week prior to
publication
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of publication

Universities

UNIVERSITY OF JOS, NIGERIA

Applications are invited from suitably qualified candidates for the following:

FACULTY OF ARTS

Department of Religious Studies

Senior Lecturer
Lecturers I and II

Areas of specialisation:
(i) Arabic Language and Literature
(ii) Islamic Studies
(iii) Bible and Theology
(iv) Christian History and Thought
(v) Christian Ethics and Social Teaching
(vi) Christian Liturgy and Worship
(vii) Christian Mysticism and Spirituality
(viii) Christian Philosophy and Theology
(ix) Christian Social and Political Thought
(x) Christian Literature and Thought
(xi) Christian Art and Architecture
(xii) Christian Music and Liturgy
(xiii) Christian History and Thought
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(xv) Christian Liturgy and Worship
(xvi) Christian Mysticism and Spirituality
(xvii) Christian Philosophy and Theology
(xviii) Christian Social and Political Thought
(xix) Christian Literature and Thought
(xx) Christian Art and Architecture
(xxi) Christian Music and Liturgy

Candidates must also be perfect in Arabic

Department of English:

Senior Lecturer
Lecturers I and II

Areas of specialisation:
(i) English Literature
(ii) English Language
(iii) English History and Thought
(iv) English Philosophy and Theology
(v) English Social and Political Thought
(vi) English Literature and Thought
(vii) English Art and Architecture
(viii) English Music and Liturgy
(ix) English History and Thought
(x) English Ethics and Social Teaching
(xi) English Liturgy and Worship
(xii) English Mysticism and Spirituality
(xiii) English Philosophy and Theology
(xiv) English Social and Political Thought
(xv) English Literature and Thought
(xvi) English Art and Architecture
(xvii) English Music and Liturgy

Candidates must have a wide range of experience in English Literature and Language

Department of Languages and Linguistics:

Lecturers I and II

Areas of specialisation:
(i) French Language and Literature
(ii) French History and Thought
(iii) French Philosophy and Theology
(iv) French Social and Political Thought
(v) French Literature and Thought
(vi) French Art and Architecture
(vii) French Music and Liturgy
(viii) French History and Thought
(ix) French Ethics and Social Teaching
(x) French Liturgy and Worship
(xi) French Mysticism and Spirituality
(xii) French Philosophy and Theology
(xiii) French Social and Political Thought
(xiv) French Literature and Thought
(xv) French Art and Architecture
(xvi) French Music and Liturgy

Candidates should have a wide range of experience in French Language and Literature

Department of Theatre Arts:

Lecturers I and II

Areas of specialisation:
(i) Theatre History and Thought
(ii) Theatre Language and Literature
(iii) Theatre Philosophy and Theology
(iv) Theatre Social and Political Thought
(v) Theatre Literature and Thought
(vi) Theatre Art and Architecture
(vii) Theatre Music and Liturgy
(viii) Theatre History and Thought
(ix) Theatre Ethics and Social Teaching
(x) Theatre Liturgy and Worship
(xi) Theatre Mysticism and Spirituality
(xii) Theatre Philosophy and Theology
(xiii) Theatre Social and Political Thought
(xiv) Theatre Literature and Thought
(xv) Theatre Art and Architecture
(xvi) Theatre Music and Liturgy

Candidates should have a wide range of experience in Theatre Arts

FACULTY OF SOCIAL SCIENCES

Department of Political Science:

Lecturers I and II

Areas of specialisation:
(i) Political Science
(ii) Political History and Thought
(iii) Political Philosophy and Theology
(iv) Political Social and Political Thought
(v) Political Literature and Thought
(vi) Political Art and Architecture
(vii) Political Music and Liturgy
(viii) Political History and Thought
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(xii) Political Philosophy and Theology
(xiii) Political Social and Political Thought
(xiv) Political Literature and Thought
(xv) Political Art and Architecture
(xvi) Political Music and Liturgy

Candidates should have a wide range of experience in Political Science

Department of Psychology:

Senior Lecturer
Lecturers I and II

Areas of specialisation:
(i) Psychology
(ii) Psychology History and Thought
(iii) Psychology Philosophy and Theology
(iv) Psychology Social and Political Thought
(v) Psychology Literature and Thought
(vi) Psychology Art and Architecture
(vii) Psychology Music and Liturgy
(viii) Psychology History and Thought
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(xii) Psychology Philosophy and Theology
(xiii) Psychology Social and Political Thought
(xiv) Psychology Literature and Thought
(xv) Psychology Art and Architecture
(xvi) Psychology Music and Liturgy

Candidates should have a wide range of experience in Psychology

Department of Economics:

Senior Lecturer
Lecturers I and II

Areas of specialisation:
(i) Economics
(ii) Economics History and Thought
(iii) Economics Philosophy and Theology
(iv) Economics Social and Political Thought
(v) Economics Literature and Thought
(vi) Economics Art and Architecture
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(viii) Economics History and Thought
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(xii) Economics Philosophy and Theology
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(xiv) Economics Literature and Thought
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(xvi) Economics Music and Liturgy

Candidates should have a wide range of experience in Economics

Department of Sociology:

Senior Lecturer
Lecturers I and II

Areas of specialisation:
(i) Sociology
(ii) Sociology History and Thought
(iii) Sociology Philosophy and Theology
(iv) Sociology Social and Political Thought
(v) Sociology Literature and Thought
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(vii) Sociology Music and Liturgy
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(xiv) Sociology Literature and Thought
(xv) Sociology Art and Architecture
(xvi) Sociology Music and Liturgy

Candidates should have a wide range of experience in Sociology

Department of Building:

Senior Lecturer
Lecturers I and II

Areas of specialisation:
(i) Building
(ii) Building History and Thought
(iii) Building Philosophy and Theology
(iv) Building Social and Political Thought
(v) Building Literature and Thought
(vi) Building Art and Architecture
(vii) Building Music and Liturgy
(viii) Building History and Thought
(ix) Building Ethics and Social Teaching
(x) Building Liturgy and Worship
(xi) Building Mysticism and Spirituality
(xii) Building Philosophy and Theology
(xiii) Building Social and Political Thought
(xiv) Building Literature and Thought
(xv) Building Art and Architecture
(xvi) Building Music and Liturgy

Candidates should have a wide range of experience in Building

Social Work Unit:

Senior Lecturer
Lecturers I and II

Areas of specialisation:
(i) Social Work
(ii) Social Work History and Thought
(iii) Social Work Philosophy and Theology
(iv) Social Work Social and Political Thought
(v) Social Work Literature and Thought
(vi) Social Work Art and Architecture
(vii) Social Work Music and Liturgy
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(xiii) Social Work Social and Political Thought
(xiv) Social Work Literature and Thought
(xv) Social Work Art and Architecture
(xvi) Social Work Music and Liturgy

Candidates should have a wide range of experience in Social Work

FACULTY OF EDUCATION

Department of Education:

Senior Lecturer
Lecturers I and II

Areas of specialisation:
(i) Education
(ii) Education History and Thought
(iii) Education Philosophy and Theology
(iv) Education Social and Political Thought
(v) Education Literature and Thought
(vi) Education Art and Architecture
(vii) Education Music and Liturgy
(viii) Education History and Thought
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(xiii) Education Social and Political Thought
(xiv) Education Literature and Thought
(xv) Education Art and Architecture
(xvi) Education Music and Liturgy

Candidates should have a wide range of experience in Education

FACULTY OF CONTINUING EDUCATION

Department of Adult Education:

Senior Lecturer
Lecturers I and II

Areas of specialisation:
(i) Adult Education
(ii) Adult Education History and Thought
(iii) Adult Education Philosophy and Theology
(iv) Adult Education Social and Political Thought
(v) Adult Education Literature and Thought
(vi) Adult Education Art and Architecture
(vii) Adult Education Music and Liturgy
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(xii) Adult Education Philosophy and Theology
(xiii) Adult Education Social and Political Thought
(xiv) Adult Education Literature and Thought
(xv) Adult Education Art and Architecture
(xvi) Adult Education Music and Liturgy

Candidates should have a wide range of experience in Adult Education

FACULTY OF NATURAL SCIENCES

Department of Botany:

Senior Lecturer
Lecturers I and II

Areas of specialisation:
(i) Botany
(ii) Botany History and Thought
(iii) Botany Philosophy and Theology
(iv) Botany Social and Political Thought
(v) Botany Literature and Thought
(vi) Botany Art and Architecture
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(xiii) Botany Social and Political Thought
(xiv) Botany Literature and Thought
(xv) Botany Art and Architecture
(xvi) Botany Music and Liturgy

Candidates should have a wide range of experience in Botany



Coláiste na hOllscoile Corcaigh
University College Cork

DIARY AND FOOD ECONOMICS
COMPUTER SCIENCE

Applications are invited for the full-time permanent posts:

- (1) Statutory Lectureship in the Department of Dairy and Food Economics, which is at present developing programmes in Agribusiness (especially co-operatives), Food Marketing and Food Policy.
- (2) Assistant Lectureship/College Lectureship (a number of posts) in the Department of Computer Science.

Salary Scale (Under review): IR£11,110 - £18,780

College Lecturer: IR£9,087 - £9,586 p.a.

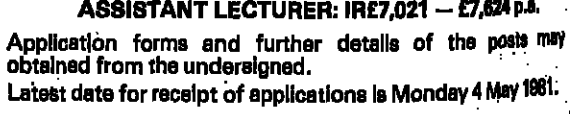
IR£10,302 - £13,188 p.a.

Assistant Lecturer: IR£7,021 - £7,824 p.a.

Application forms and further details of the posts may be obtained from the undersigned.

Latest date for receipt of applications is Monday 4 May 1981.

M. J. KELLERER
Secretary



Coláiste na hOllscoile Corcaigh
University College Cork



Coláiste na hOllscoile Corcaigh
University College Cork

ASSISTANT LECTURER/
COLLEGE LECTURER
BIOCHEMISTRY

Applications are invited for a full-time permanent post as Assistant Lecturer/College Lecturer in the Department of Biochemistry. Experience in the field of molecular genetic engineering is essential.

The salary scales (under review) are:

College Lecturer: £8,087-£9,586 p.a.

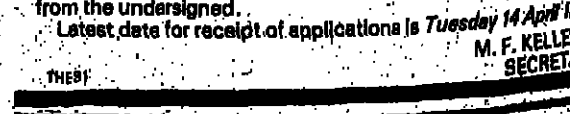
£10,302-£13,188 p.a.

£7,021-£7,824 p.a.

Application forms and further details of the post may be obtained from the undersigned.

Latest date for receipt of applications is Tuesday 14 April 1981.

M. J. KELLERER
Secretary



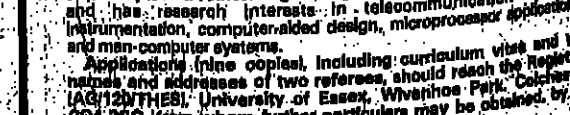
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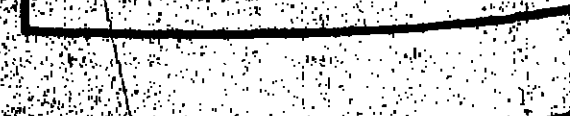
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Coláiste na hOllscoile Corcaigh
University College Cork

Universities continued

ESSEX
UNIVERSITY OF
M.A. IN POLITICAL ECONOMY
DEPARTMENT OF
POLITICAL ECONOMY
The University of Essex is offering a new M.A. in Political Economy. The course is designed to provide students with a broad knowledge of the theory and practice of political economy. The course is taught by leading experts in the field. The course is open to students from all universities. The course is taught by leading experts in the field. The course is open to students from all universities. The course is taught by leading experts in the field. The course is open to students from all universities.

THE UNIVERSITY OF NEW ENGLAND
Australia
LECTURER IN ENGLISH
(Permanent Tenure)
Applications are invited for a lectureship in English Literature. Applicants should have a good Honours degree in English Literature and preferably some previous teaching experience. Postgraduate study and/or scholarly publication are desirable qualifications.

Southampton
THE UNIVERSITY OF
CONSULTANT ENGINEER/
DEPUTY MANAGER
The Wolfson Electroscience Advisory Unit based in the Electrical Engineering Department of Southampton University requires an Engineer/Deputy Manager. The Unit carries out consultancy work for government and industry on electroscience and related topics ranging from surface coatings technology to industrial safety. Post holders should have a degree in Engineering and a minimum of five years' experience in a similar position. The post holder should be a graduate in Physics, Chemistry, Electronics or Engineering.

Loughborough
UNIVERSITY OF
TECHNOLOGY
LECTURER
Applications are invited for the post of Lecturer in the Department of Library and Information Studies. The post will be primarily concerned with the teaching of indexing (traditional cataloguing and classification) both practical and theoretical, and with the application of automated processes in this field. Sound work experience in the bibliographical (acquisitions/cataloguing) or indexing unit of a large system would be an advantage.

HONG KONG
UNIVERSITY OF
SCIENCE AND TECHNOLOGY
LECTURER IN PHYSICS
Applications are invited for a full-time permanent post of Lecturer in the Department of Physics. The post holder should have a Ph.D. in Physics and a minimum of three years' postgraduate research experience. The post holder should be a graduate in Physics, Chemistry, Electronics or Engineering.

UNIVERSITY OF TASMANIA
CONTRACT
LECTURESHP IN
PHOTOGRAPHY
Applications are invited for a two year contract appointment as Lecturer in the Department of Photography. The post holder should have a degree in Photography and a minimum of five years' experience in a similar position. The post holder should be a graduate in Photography, Chemistry, Electronics or Engineering.

THE UNIVERSITY OF ADELAIDE
Australia
LECTURER IN
GEOGRAPHY (A1219)
It is anticipated that the successful applicant will have a major involvement in the first year course in addition to the opportunity for teaching at other levels. Preference will be given to a physical geographer, but persons in all fields of geography are encouraged to apply.

KENT
UNIVERSITY OF
CANTERBURY
FACULTY OF SOCIAL
SCIENCES
SOCIAL PSYCHOLOGY
RESEARCH UNIT
Applications are invited for a full-time permanent post of Lecturer in the Department of Social Psychology. The post holder should have a Ph.D. in Social Psychology and a minimum of three years' postgraduate research experience. The post holder should be a graduate in Social Psychology, Chemistry, Electronics or Engineering.

WITWATERSRAND
UNIVERSITY OF THE
JOHANNESBURG
CHAIR OF STATISTICS
Applications are invited for a full-time permanent post of Lecturer in the Department of Statistics. The post holder should have a Ph.D. in Statistics and a minimum of three years' postgraduate research experience. The post holder should be a graduate in Statistics, Chemistry, Electronics or Engineering.

LEEDS
THE UNIVERSITY OF
CHAIR OF FINE ART
Applications are invited for a full-time permanent post of Lecturer in the Department of Fine Art. The post holder should have a Ph.D. in Fine Art and a minimum of three years' postgraduate research experience. The post holder should be a graduate in Fine Art, Chemistry, Electronics or Engineering.

BRADFORD
UNIVERSITY OF
COMPUTER SCIENCE
Applications are invited for a full-time permanent post of Lecturer in the Department of Computer Science. The post holder should have a Ph.D. in Computer Science and a minimum of three years' postgraduate research experience. The post holder should be a graduate in Computer Science, Chemistry, Electronics or Engineering.

BIRMINGHAM
UNIVERSITY OF
PAULY OF LAW
Applications are invited for a full-time permanent post of Lecturer in the Department of Law. The post holder should have a Ph.D. in Law and a minimum of three years' postgraduate research experience. The post holder should be a graduate in Law, Chemistry, Electronics or Engineering.

ESSEX
UNIVERSITY OF
M.A. IN POLITICAL ECONOMY
DEPARTMENT OF
POLITICAL ECONOMY
The University of Essex is offering a new M.A. in Political Economy. The course is designed to provide students with a broad knowledge of the theory and practice of political economy. The course is taught by leading experts in the field. The course is open to students from all universities. The course is taught by leading experts in the field. The course is open to students from all universities.

THE UNIVERSITY OF NEW ENGLAND
Australia
LECTURER IN ENGLISH
(Permanent Tenure)
Applications are invited for a lectureship in English Literature. Applicants should have a good Honours degree in English Literature and preferably some previous teaching experience. Postgraduate study and/or scholarly publication are desirable qualifications.

Southampton
THE UNIVERSITY OF
CONSULTANT ENGINEER/
DEPUTY MANAGER
The Wolfson Electroscience Advisory Unit based in the Electrical Engineering Department of Southampton University requires an Engineer/Deputy Manager. The Unit carries out consultancy work for government and industry on electroscience and related topics ranging from surface coatings technology to industrial safety. Post holders should have a degree in Engineering and a minimum of five years' experience in a similar position. The post holder should be a graduate in Physics, Chemistry, Electronics or Engineering.

Loughborough
UNIVERSITY OF
TECHNOLOGY
LECTURER
Applications are invited for the post of Lecturer in the Department of Library and Information Studies. The post will be primarily concerned with the teaching of indexing (traditional cataloguing and classification) both practical and theoretical, and with the application of automated processes in this field. Sound work experience in the bibliographical (acquisitions/cataloguing) or indexing unit of a large system would be an advantage.

HONG KONG
UNIVERSITY OF
SCIENCE AND TECHNOLOGY
LECTURER IN PHYSICS
Applications are invited for a full-time permanent post of Lecturer in the Department of Physics. The post holder should have a Ph.D. in Physics and a minimum of three years' postgraduate research experience. The post holder should be a graduate in Physics, Chemistry, Electronics or Engineering.

UNIVERSITY OF TASMANIA
CONTRACT
LECTURESHP IN
PHOTOGRAPHY
Applications are invited for a two year contract appointment as Lecturer in the Department of Photography. The post holder should have a degree in Photography and a minimum of five years' experience in a similar position. The post holder should be a graduate in Photography, Chemistry, Electronics or Engineering.

THE UNIVERSITY OF ADELAIDE
Australia
LECTURER IN
GEOGRAPHY (A1219)
It is anticipated that the successful applicant will have a major involvement in the first year course in addition to the opportunity for teaching at other levels. Preference will be given to a physical geographer, but persons in all fields of geography are encouraged to apply.

KENT
UNIVERSITY OF
CANTERBURY
FACULTY OF SOCIAL
SCIENCES
SOCIAL PSYCHOLOGY
RESEARCH UNIT
Applications are invited for a full-time permanent post of Lecturer in the Department of Social Psychology. The post holder should have a Ph.D. in Social Psychology and a minimum of three years' postgraduate research experience. The post holder should be a graduate in Social Psychology, Chemistry, Electronics or Engineering.

WITWATERSRAND
UNIVERSITY OF THE
JOHANNESBURG
CHAIR OF STATISTICS
Applications are invited for a full-time permanent post of Lecturer in the Department of Statistics. The post holder should have a Ph.D. in Statistics and a minimum of three years' postgraduate research experience. The post holder should be a graduate in Statistics, Chemistry, Electronics or Engineering.

LEEDS
THE UNIVERSITY OF
CHAIR OF FINE ART
Applications are invited for a full-time permanent post of Lecturer in the Department of Fine Art. The post holder should have a Ph.D. in Fine Art and a minimum of three years' postgraduate research experience. The post holder should be a graduate in Fine Art, Chemistry, Electronics or Engineering.

ESSEX
UNIVERSITY OF
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DEPARTMENT OF
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BRADFORD
UNIVERSITY OF
COMPUTER SCIENCE
Applications are invited for a full-time permanent post of Lecturer in the Department of Computer Science. The post holder should have a Ph.D. in Computer Science and a minimum of three years' postgraduate research experience. The post holder should be a graduate in Computer Science, Chemistry, Electronics or Engineering.

BIRMINGHAM
UNIVERSITY OF
PAULY OF LAW
Applications are invited for a full-time permanent post of Lecturer in the Department of Law. The post holder should have a Ph.D. in Law and a minimum of three years' postgraduate research experience. The post holder should be a graduate in Law, Chemistry, Electronics or Engineering.

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THE QUEEN'S COLLEGE GLASGOW

(A Scottish Central Institution)

ACADEMIC APPOINTMENTS

- POSTS 81/01 and 81/02** SENIOR LECTURERS 'A' (P.L. equivalent) in PHYSIOTHERAPY: These senior staff would have responsibility for the development of two specialist subject areas at degree and diploma level combined with administrative responsibility for the 2nd and 3rd years of the diploma course.
- POSTS 81/03 and 81/04** LECTURERS 'A' in CATERING STUDIES: One post is in Food Service and the other is in Food Production. Both involve teaching at Higher Diploma and Post Graduate level as well as developmental work on a new degree submission to CNA.
- POSTS 81/05 and 81/06** LECTURERS 'A' in PHYSIOTHERAPY: These staff will teach on the Physiotherapy Diploma course, and be involved in the development of a Physiotherapy degree. For one post, an interest in Bio-engineering would be an advantage.
- POST 81/07** LECTURER 'A' in COMPUTING and STATISTICS: This is a new and challenging post established to develop a college based computer service.

SALARY SCALES (under review from 1.4.81)

Lecturer 'A': £5958-£10527 (Bar) -£11307
Senior Lecturer 'A': £10509-£11697 (Bar) -£13281

Further particulars and application forms for the above posts may be obtained from:

Personnel Office (TS)
THE QUEEN'S COLLEGE, GLASGOW,
1 Park Drive,
Glasgow, G3 6LP.

Please indicate which post you are interested in, by quoting the post reference number. The closing date for receipt of applications is Friday, 8th May, 1981.

PORTSMOUTH POLYTECHNIC

Applications are invited for the post of

Professor/Head of Department of Surveying

This post becomes vacant in September, 1981 on the retirement of the present Head of Department.
Candidates should have high academic and professional qualifications in Estate Management or Building Surveying or Quantity Surveying, with preferably, educational and administrative experience.
Salary according to Burnham Scale Grade VI: £13,935 to £15,432 per annum (under review).

Application forms, and further particulars from the Staff Office, Portsmouth Polytechnic, Alexandra House, Newnham Road, Portsmouth PO1 2QG to whom completed applications should be returned by 7th May, 1981, quoting ref U.105. THES

SHEFFIELD CITY POLYTECHNIC

DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING 2 POSTS - PRINCIPAL LECTURER AND LECTURER II

Applicants should possess a high degree and relevant industrial, research experience. Specialised knowledge is sought in the fields of: electronic systems; control engineering and practical methods.
Salary: Principal Lecturer - £10,800-£11,712 (bar) £12,345
Lecturer II - £8,012-£8,792

Application forms and further details for the above posts from the Personnel Office, Sheffield City Polytechnic, Dept. 734, Holloway House, Finsley Avenue, Sheffield S1 2BB, or by phoning 0742 20011 ext. 367. Completed forms should be returned by 10th April. THES

WOLVERHAMPTON

LECTURER IN HEALTH VISITING

Applications are invited from qualified Health Visitor, Tutor, preferably graduate for teaching on the Health Visiting and related courses and to assist in the planning and development of existing courses. A new area of work. An interest in research and development in Health Visiting would be an advantage.

Application forms and details from Personnel Office, The Polytechnic, Wolverhampton, W1 1BB, telephone (0902) 10684 (34 lines telephone service).

WOLVERHAMPTON

ASSISTANT ACADEMIC

Applications are invited from qualified persons for the post of Assistant Academic in the Department of Health Visiting. The successful candidate will be responsible for the Academic Planning and Course Support Unit in the Department. The successful candidate will be responsible for the Academic Planning and Course Support Unit in the Department. The successful candidate will be responsible for the Academic Planning and Course Support Unit in the Department.

Salary: £9,014-£9,576 to £9,812.
Application form and details from Personnel Office, The Polytechnic, Wolverhampton, W1 1BB, telephone (0902) 10684 (34 lines telephone service).

PORTSMOUTH

POLYTECHNIC

Applications are invited for the post of Lecturer in Health Visiting. The successful candidate will be responsible for the Academic Planning and Course Support Unit in the Department. The successful candidate will be responsible for the Academic Planning and Course Support Unit in the Department.

Application forms and details from Personnel Office, The Polytechnic, Portsmouth, PO1 2QG, telephone (0705) 20011 ext. 367. Completed forms should be returned by 10th April. THES

Kingston Polytechnic

Applications are invited for the following posts available from September 1981:

- School of Architecture
LII/SL: Building Construction (ref AB)
School of Arts and Languages
LII: English Literature - Renaissance to the Present Day (ref AL)
School of Business
LII/SL: Business Administration (ref BA)
School of Economics and Politics
LII: Quantitative Methods (ref EQ)
LII: Economics/Mathematical Economics (ref EM)
School of Electronic Engineering and Computer Science
LII/SL: Digital/Data Communications (ref ED)
School of Law
LII/SLPPL: Law (ref LL)
School of Liberal Studies
SL: History of Art and Design (ref LH)
School of Mechanical, Aeronautical and Production Engineering
LII/SL: Control, Stress, Dynamics and/or Aeronautical Engineering (ref MAP)
School of Three-dimensional Design
LII/SL: Interior Design (ref ID)
LII/SL: Furniture & Related Products (ref IF)

Salary scales:—
LII: £8,012-£9,702; SL: £8,962-£10,539 (bar)-£11,295;
PL: £10,509-£11,712 (bar) -£13,245.
Salaries are expected to be increased by 7% from 1st April.
London Allowance £498.

Requests for details and application forms should be made in writing, quoting reference number and enclosing SAE to Academic Registry, Dept. AO, Kingston Polytechnic, Penrhyn Road, Kingston upon Thames, KT1 2EE. No telephone enquiries please. Closing date 27th April, 1981. THES

NORTH LONDON

THE POLYTECHNIC OF

Applications are invited for the

following appointments to

commence in September, 1981

DEPARTMENT OF BUSINESS

STUDIES

LECTURER GRADE II IN

QUANTITATIVE METHODS

Applicants should have a good

honours degree in a relevant

subject and preferably a higher

degree.

The successful candidate will be

expected to participate in the

teaching of Quantitative Methods

within a broad range of Business

Studies courses.

DEPARTMENT OF FOOD &

BIOLOGICAL SCIENCES

LECTURER GRADE II

IN FOOD TECHNOLOGY

The Department offers courses at

degree and diploma level in

specialised areas of Institutional

Science, Food Science, Food

Technology, Food Preservation,

Nutrition/Dietetics and Biotech-

nology.

The Lecturer will be required to

teach and supervise practical

work at both levels. The empha-

sis of the work will be on food

modulation, planning, operation and

control with an analytical and cost

effective approach to the industry.

Applicants must be of graduate

level and appropriately qualified to

teach the subjects mentioned.

Successful candidates should

include evidence of experience in

the following industrial or academic

experience would be an advantage.

Those interested please contact

the Head of Department.

DEPARTMENT OF LANGUAGE

LECTURER GRADE II

IN DRAMA

To teach in core and optional

courses (with some contribution to

modules) on B.A. English Literature

and Creative Writing evening and

day degrees and M.A. Modern

Drama Studies. Applicants should

have a good degree in English (or

Drama and Drama and Research

experience).

Salary Scale £8,012 to £9,702

plus 10% London Allowance (quali-

fied). The successful candidate will

be responsible for the Academic

Planning and Course Support Unit

in the Department. The successful

candidate will be responsible for the

Academic Planning and Course

Support Unit in the Department.

SENIOR LECTURER IN ENGINEERING MANUFACTURE

This is a funded appointment for a period of three years under the BRC/DOL Teaching Company Scheme. The successful candidate will contribute to the work of the departments of engineering and to the teaching company scheme and must be able to offer expertise in at least one of the following disciplines:—
(a) Computer aided design
(b) Robotics and automation
(c) Production technology
(d) Production organization
Applicants should hold at least an honours degree in production, mechanical, industrial or electronic engineering, and preferably a higher degree, together with relevant industrial or academic experience. Commencing Salary within the range of £9,324-£10,116.

Further details and forms of application from The Assistant Director (Administration), Trent Polytechnic, Burton Street, Nottingham NG1 4BU. Telephone Nottingham (0602) 48248. Forms to be returned as soon as possible. THES

TRENT POLYTECHNIC NOTTINGHAM

NORTH STAFFS POLY

Department of Business and Legal Studies LECTURER II/SENIOR LECTURER IN MANAGEMENT ACCOUNTING

This post involves the teaching of management accounting and related topics on a range of degree, diploma and final professional courses.
Applicants should be graduates preferably with a professional qualification.

Salary scale:—(under review)

Lecturer II £8012-£9702

Senior Lecturer £9802-£10639 (bar)-£11295

Application forms and further particulars can be

obtained from: The Deputy Director (Staffing), North

Staffs Polytechnic, College Road, Stoke on

Trent ST2 2DE. THES

Polytechnics continued



PLYMOUTH POLYTECHNIC

PLYMOUTH POLYTECHNIC BLOCK
Plymouth Business School

LECTURER II/SENIOR LECTURER BUSINESS ORGANISATION & POLICY

Required to teach in the subject areas of Business Organisation and Policy on both undergraduate and postgraduate courses. Industrial experience and an appropriate higher degree are desirable.

Faculty of Technology
Department of Mathematics, Statistics and Computing
LECTURER II/SENIOR LECTURER
COMPUTING/INFORMATION SCIENCE

Applications welcomed from candidates qualified in information science or in computer science but with a strong interest in non-numeric applications of computers.

LECTURER II—STATISTICS
Applications would be welcomed from candidates which expertise in stochastic processes or time series analysis.

Good Honours Degrees together with appropriate industrial, commercial and/or research experience required for the above posts.

Department of Electrical and Electronic Engineering
SENIOR LECTURER/LECTURER II
ELECTRICAL AND ELECTRONIC
ENGINEERING

Honours Graduates in Engineering with both teaching and industrial experience. Preference will be given to practical experience of applying microelectronics to electrical and electronic engineering systems. Research experience would be an advantage.

Department of Architecture
LECTURER II
(Temporary one year appointment)

Design Studio Tutor with special expertise/experience in computer graphics or interior design or architectural theory/history.

Salary Scale:
Senior Lecturer: £9624-£12,141
Lecturer II: £6,462-£10,431

Application forms to be returned by 22nd April 1981 can be obtained with further particulars from the Personnel Office, Plymouth Polytechnic, Drake Circus, Plymouth, PL4 8AA.

THES3
Drake Circus, Plymouth, Devon. PL4 8AA.

Fellows continued

LONDON

MIDDLESEX POLYTECHNIC

SENIOR LECTURER/PRINCIPAL

IN SCIENTIFIC ILLUSTRATION

For up to £11,795 per annum plus 10% London Allowance.

The successful candidate will be

responsible for the development of

the scientific illustration service

for the Polytechnic. The successful

candidate will be responsible for the

development of the service and

will be required to teach and

supervise practical work at both

levels. The emphasis of the work

will be on food modulation, plan-

ning, operation and control with an

analytical and cost effective ap-

proach to the industry.

Applicants must be of graduate

level and appropriately qualified to

teach the subjects mentioned.

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Salary Scale £8,012 to £9,702

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Support Unit in the Department.

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Hull College of Higher Education

Suitably qualified and experienced persons are required to fill the following senior academic posts:

- HEAD OF SCHOOL (Grade 6) - TEACHER EDUCATION**
- HEAD OF SCHOOL (Grade 5) - APPLIED SOCIAL STUDIES**
- HEAD OF SCHOOL (Grade 5) - VISUAL COMMUNICATION DESIGN**
- HEAD OF CENTRE (Grade 6) - MANAGEMENT**
- HEAD OF CENTRE (Grade 5) - FISHERIES STUDIES**

Burnham (F.E.) Salaries:
HEAD OF DEPARTMENT GRADE 6: £15,045-£16,591 p.a.
HEAD OF DEPARTMENT GRADE 5: £13,914-£15,462 p.a.

Further details and application forms may be obtained from:
The Personnel Office

HULL COLLEGE OF HIGHER EDUCATION

Queen's Gardens, HULL HU1 3DH
Telephone (0482) 224121 Ext. 235/292

THES6

the College of Ripon & York St John

APPOINTMENT OF LECTURER GRADE II

Applications are invited from well qualified graduates or graduate equivalents for the following post in this Church of England Voluntary College of Higher Education (1700 men and women) which offers courses validated by the University of Leeds. The appointment will date from 1st September 1981 and will be at an appropriate point on the Lecturer Grade II Scale (£8,012-£9,702).

DEPARTMENT OF HISTORICAL STUDIES LECTURER GRADE II (HISTORICAL STUDIES)

Competence in American Studies is necessary, preferably with a range of knowledge of both History and Literature. Further details of the above post and application forms may be obtained from the Principal, The College of Ripon and York St. John, Lord Mayor's Walk, York YO3 7EX, to whom completed forms should be returned to arrive not later than MONDAY 20th April 1981.

THES6

COUNTY OF AVON BATH COLLEGE OF HIGHER EDUCATION

Applications are invited for three temporary appointments as Lecturers Grade II for one year from 1st September 1981, in:

1. Home Economics
2. Music
3. Sociology

Applicants for posts 1 and 2 should have good experience of teaching in schools and be able to contribute to the academic and professional elements of the subject in B.Ed. Degree courses. Applicants for post 3 should be able to contribute to the teaching of sociology in B.Ed. and B.Sc. Honours Degrees.

The appointments are to replace members of staff granted Study Leave during the year 1981-82. Further particulars may be obtained from the Principal, Bath College of Higher Education, Newton Park, Newton St. Lo, Bath, BA2 9BN, to whom applications (not forms), with names of three referees, should be submitted by 31st April 1981. Salary according to the Burnham Scales for Further Education, at present £8,012 to £9,702 but subject to review from 1st April 1981. THES6

COUNTY OF AVON BATH COLLEGE OF HIGHER EDUCATION

Applications are invited for the appointment as

Lecturer Grade II in Mathematics

with effect from 1st September 1981.

Applicants should be well qualified academically and have had good experience of teaching mathematics in schools. Ability to teach courses on computer would be an advantage.

Further particulars may be obtained from the Principal, Bath College of Higher Education, Newton Park, Newton St. Lo, Bath BA2 9BN to whom applications (not forms) with names of three referees, should be submitted by 24th April, 1981.

Salary according to Burnham Scales for Further Education: £8,012 to £9,702.

THES6

Bulmershe College of Higher Education

Required for September 1981:

Lecturer II/Senior Lecturer in DRAMA

To teach on Major and Minor courses in Film and Drama within the BA Honours (Combined Studies) programme. Ability to teach aspects of 19th and 20th Century European Drama is essential. Experience of practical Drama will be an advantage. Further details and application forms may be obtained from the Deputy Principal (THS1), Bulmershe College of Higher Education, Woodlands Avenue, Emsley, Reading RG6 1HY. Telephone Reading (0734) 863387.

Completed forms to be returned by 24th April 1981.

THES6

Key English Language Teaching Scheme.

The KELT Scheme is part of Britain's programme of aid to developing countries under which ELT specialists serve in key posts in 40 countries. The posts listed below, tenable from 1 September 1981 or earlier, are in addition to the 120 already filled and the 11 vacancies recently advertised:

COLOMBIA

English Language Adviser
Ministry of Education, Bogotá
(Ref 81 K 12)
The Job: To collaborate with the Ministerio de Educación Nacional in its plans for curriculum development in relation to the teaching of English at secondary level; the design programmes of in-service training for teachers and to design materials for teacher training.
Special Qualifications: Experience of teacher training and curriculum development in a developing country. Materials writing experience also desirable. Candidates will require a good working knowledge of Spanish.
Salary: £9892 - £13,827 per annum.

MALI

ELT Adviser at the Institut
Pedagogique National,
Ministry of Education, Bamako
(Ref 81 K 23)
The Job: To develop ESP courses for civil servants and others as required; to promote English by radio programmes and to provide teacher training through English by radio and supporting correspondence materials and to undertake some in-service training.
Special Qualifications: 5 years experience in ESP and teacher training, including experience in Africa. Previous experience of English by radio an advantage. Good knowledge of French essential.
Salary: £11,127 - £13,827 per annum.

OMAN

1. Head of English Language
Department, Oman Health
Institute, Muscat
(Ref 81 K 22)
The Job: To be responsible to the Principal for the administration of the ELT Department, organizing the work, advising and supervising teachers and identifying books and teaching material requirements; to revise the existing ELT syllabus and evaluate ESP needs of all departments and develop syllabi for them; and to produce teaching materials.
Special Qualifications: Male candidate, aged 35-45, with 5 years relevant overseas experience, including ESP (preferably in medical field), curriculum design and materials production. Knowledge of Arabic useful.
Salary: £9,892-£13,827 per annum.

2. Adviser in ELT

Ministry of Education, Muscat
(Ref 81 K 13)
The Job: To advise Ministry of Education on all matters relating to the ELT and to manage and coordinate the work of the team of 9 KELTs in Oman concerned with teacher training. In-service training and working with the Longmans project "English for Oman" will be important elements. The work involves much travelling and evaluation.
Special Qualifications: 5 years teaching experience including teacher training overseas. Some administrative experience including project management desirable. Arabic essential.
Salary: £11,127-£13,827 per annum.

SENEGAL

Lecturer/Teacher (Specialist
in Audio-Visual Aids and
Materials Production)
British Senegalese Institute,
Dakar
(Ref 81 K 24)
The Job: to plan, write and coordinate ESP courses and new Senegalese examination courses; to produce new written and audio-visual materials for general courses; to prepare teachers in-service materials; to supervise maintenance of audio-visual equipment and to teach for a minimum of 10 hours a week.
Special Qualifications: 3 years relevant experience overseas including ESP, AVA and materials production. French essential.
Salary: £9,892-£10,717 per annum.

SIERRA LEONE

Lecturers in English Language,
1. Primary Teacher Training
College, Freetown and
(Ref 81 K 20)
2. Primary Teacher Training
College, Makeni
(Ref 81 K 21)
The Job: Part of programme to revitalize English teaching at Primary level in Sierra Leone. The lecturers will assist in preparation and implementation of an English Syllabus for trainees; teach English and Method courses in the College for 10-12 hours a week; participate in in-service training courses; and arrange on the job training of counterparts.
Special Qualifications: Primary teaching and/or primary teacher training experience desirable. For Makeni candidates should be single or married without children.
Salary: £9,892-£10,717 per annum.

SOMALIA

Curriculum Development
Textbook Specialist
(English Language)
Curriculum Development
Centre, Ministry of Education,
Mogadishu
(Ref 81 K 18)
The Job: To organize the piloting of ELT materials for secondary level; to help organize and run technical courses; to assist in the design and writing of textbooks and teaching materials and to help modify and adapt them.
Special Qualifications: 3 years overseas teaching experience, including textbook and materials writing.
Salary: £9,892-£10,717 per annum.

Please write briefly stating qualifications and length of appropriate experience, quoting relevant references, number and title of post for further details and application forms to KELT Section, Overseas Educational Appointments Department, The British Council, 26 Davies Street, London W1V 2AA.

SUDAN

Lecturer/Materials Writer
(ESP) English Department,
Khartoum Polytechnic
(Ref 81 K 15)
The Job: This is a supportive post in the area of course design and materials development to the KELT Head of Department appointed in 1979 to set up the infrastructure for a Service English Department. The Lecturer will lead 2 of 3 small materials production teams concerned with writing ESP courses for technicians studying weaving and textiles, and land-surveying/civil engineering; monitor introduction of the materials; modify them and supervise final printing; teach for approximately 6 hours a week; and set and mark examinations.
Special Qualifications: 3 years experience overseas of teaching ESP and materials writing, preferably as leader of a team. MA in Applied Linguistics essential.
Salary: £9,892-£10,717 per annum.
Curriculum Development
Adviser in English
Maridi Curriculum Development
Centre, Maridi
(Ref 81 K 41)
The Job: To organize, direct and control the production of an English Course for Primary Schools in the region. This will involve extensive research, writing and evaluation before the final production. This is part of a new project starting in January 1982. Initially the post will be located in Juba.
Special Qualifications: 5 years teaching experience overseas including textbook writing and planning. Primary level experience desirable.
Salary: £11,127-£13,827 per annum.

YEMEN ARAB REPUBLIC

Area ELT Coordinators
1. Education Office, Sana'a
(Ref 81 K 17)
2. Education Office, Taiz
(Ref 81 K 18)
The Job: To inspect and advise teachers on all aspects of the ELT programme; to coordinate work of inspectors and to liaise at all levels; to assist in implementing the KELT textbook project and new teaching techniques; to prepare and administer examinations; to organize seminars and workshops; and to attend regular meetings with colleagues in Sana'a.
Special Qualifications: Candidates must be male with some Arab World experience. Arabic is essential.
Salary: £9,892-£10,717 per annum.
General Qualifications: Essential for all posts. Degree or equivalent; teaching qualification including TEFL or educational qualification plus postgraduate qualification in TEFL or Applied Linguistics; 3-5 years teaching experience, including at least 2 years' TEFL overseas. All candidates must be UK citizens with British educational background.
Benefits: Salary free of UK income tax; variable overseas allowances according to marital status and salary level; free family passages; children's education allowance and holiday visits; free furnished accommodation; outfit allowances; medical scheme; baggage allowance; paid leave; Contract: Contract will be for 2 years' initially with the British Council.
Closing date for applications: 27 April 1981. Interviews in May/June 1981.

UNIVERSITY OF NATAL

DEPARTMENT OF FINE ARTS AND HISTORY OF ART
PIETERMARITZBURG
Applications are invited from suitably qualified persons, regardless of sex, religion, race, colour national origin for appointment to the post of:

SENIOR LECTURER IN CERAMICS
Applicants for the post should have teaching experience at tertiary level, and should be able to teach throwing for functional and sculptural purposes and to give technical lectures, and guide research, on clays, glazes and materials for studio ceramics.

The salary will be in the range: R12,750 - R17,100.
The commencing salary notch will be dependent on the qualifications and/or experience of the successful applicant. In addition, an annual vacation service bonus equivalent to 30% of one month's salary is payable, subject to Treasury regulations.
Application forms, further particulars of the post and information on pension, medical aid, group insurance, staff bursary, housing loan and subsidy schemes, long leave conditions and travelling expenses on first appointment are obtainable from the Registrar, University of Natal, P.O. Box 375, Pietermaritzburg, 3200, South Africa, with whom applications, on the prescribed form, must be lodged not later than 29th May, 1981, quoting reference number PWB/781.

CALGARY, CANADA

THE UNIVERSITY OF ALBERTA
Department of English
Applications are invited for a position at the rank of ASSISTANT PROFESSOR in the area of English Literature. The successful candidate will be responsible for teaching and supervising graduate students. The position is part of a new project starting in January 1982. Initially the post will be located in Juba.
Special Qualifications: 5 years teaching experience overseas including textbook writing and planning. Primary level experience desirable.
Salary: £11,127-£13,827 per annum.

REMINDER

Copy for classified advertisements in the

T.H.E.S.

should arrive not later than 10.00 a.m. Monday preceding the date of publication

T.H.E.S. Forthcoming Special Book Numbers

April 10 - University Presses (I)

April 24 - Psychology (I)

May 1 - European Studies

May 8 - Politics

May 15 - Chemistry

May 22 - Environmental Studies

May 29 - Law

June 5 - Social Administration and Special Feature

June 12 - Computers in Higher Education

Union view

Towards equality in education

While wind and rain lashed Southport's wide 19th-century boulevards and its 20th-century promenades, more than 300 delegates from 52 unions met for two days in the middle of March, to consider the agenda for the 51st TUC women's conference. Among them were 10 delegates from the National Association of Teachers in Further and Higher Education, drawn from the NEC and regions of the association. Our long standing concern with the position of women in society, in the education and training system, and in the trade union movement, generally was reflected in the 54 motions on the agenda which were linked to the report of the Women's Advisory Committee for the past year. The advisory committee consists of members from the TUC's General Council and members elected by conference. This year a member of Nafthe was elected to the Women's Advisory Committee, which is the first occasion any representative from the educational unions affiliated to the TUC has been elected to membership. It reflects the growing understanding and importance which women attach to education and its role in the slow progress to women's equality. This is also reflected in the annual report of the Women's Advisory Committee which is an invaluable contribution to our knowledge concerning the position of women in employment, in the family, in education and in the other social services.

The report draws particular attention to the need for change in the present system of education and training to take account of future occupational patterns and of the impact of new technology. Twenty-five recommendations are put forward on education and training,

including a call for more attention to be paid, within teacher training, to the problem of discrimination. Employers, colleges and the MSC are all urged to take more positive initiatives in training with schemes specifically designed to meet women's needs.

The TUC report's emphasis on the importance of educational and training opportunities for the future of women's equality, was echoed in the successful resolution moved by Nafthe and seconded by the AUT. This resolution highlighted the extent to which women's and girls' educational opportunities are disappearing as the education service itself is being destroyed. A programme of educational reconstruction was called for within which LEAs should consider explicit policies of equal opportunities for girls and boys throughout

the education system. At post-school level the provision of access courses into higher education, paid educational leave and many other grants could encourage many more women to continue their education.

The joint contribution made by Nafthe and the AUT (the two unions also moved and seconded a resolution on equality in pension benefits) demonstrated the common concern of the two associations to show that in times of economic recession, investment in higher education is crucial if we are to remedy the inequality women face in the profession.

Understandably, the key debate concerned the economic recession itself and its effect on women's employment. Women after women came to the rostrum to condemn the current Government's economic and social policies. The conference unanimously supported the view that the Government's callous strategy on employment was forcing women out of work and back into the home. Unions in the private and public sectors alike told desperate stories

about the numbers of women being made redundant, about the numbers both registered and unregistered, now out of work.

Two other major themes were developed at the conference. The first concerned the question of women's equality in work and in their unions. Apart from reaffirming the need to strengthen the equal opportunities legislation, the conference was united in the view that direct trade union initiatives must be taken to secure collective agreements which would commit employers to positive action programmes on women's employment, training and promotion. Nafthe, for example, has an agreement based on the TUC's equal opportunity clause.

On the other side of the coin unions must put their own houses in order and implement the TUC's "Charter of Equality for Women within Trade Unions". The second dominant issue concerned the impact of social policy for women. The changes contained in the Employment Act severely limit the right of women to return to their chosen employment after maternity leave. Fears were expressed that employers will effectively have scope for dismissal; these fears extended to the related issue of maternity benefits.

Throughout the conference Nafthe delegates were active. Apart from moving the composite motion on educational opportunities, association speakers seconded resolutions on the social consequences of unemployment, on women and social benefits and women in medicine. No trade unionist can be optimistic about the effect TUC pronouncements will have on Government policies. That, though, it is not the point. The real value of the women's TUC is that it is living proof of the talents and the ability possessed by women from a variety of age groups and jobs.

Patricia Leman

The author is vice chairman of Nafthe's Women's Rights Committee and newly elected member of TUC Women's Advisory Committee.

Importance of teaching English



Keith Hampson

What an immaculate contraption is the English language. It can clarify, it can inspire, it can convince—but it cannot make sense of a "propositional knowledge of performance in sport." Perhaps the University of Durham can.

The latest edition of *Private Eye* carries an interesting indictment for student teachers at Durham to undertake a 132-hour course in how to swim and play other games.

"Experimentation with shape and size under water will introduce students to the practical swimming 'game' we are told. 'Development' will be through watermanship to consideration of propulsive actions to specified stroke production. Seminar work will include consideration of reinforcement and the organization of practice as it relates to transference, spacing and instruction. Finally, as practical work moves towards specific games forms, emphasis will be discussed."

We can learn two useful lessons from this treatise. The first is that there seems to be plenty of scope for making non-English speaking staff redundant in Durham. Unemployment—and probably in many other universities and polys. The second is that a core curriculum for schools is long overdue.

I am not referring to those parts of a core which perpetuate the worst aspects of public school education by making God and hockey compulsory, but to the "irreducible minimum essential to the education of all children"—in the words of *Education Our Children*, the paper published by the Department of Education and Science for the Great Debate in 1977. Remember it?

That paper was a positive response to the widespread feeling that there was too much variety, too much ill-considered experimentation and too little coherent development of the secondary school curriculum. There were also fears of too much disparity in what primary pupils had learnt by the time they transferred.

The famous Callaghan-Ruskin speech in 1976 first indicated the DES's own doubts. Of course there were those, notably the NUT and local authorities, who forecast Armageddon should central government step into the secret garden. But any sensible person could see that if we were to have a national system of education then the government had to make a judgment of what the priorities should be.

This could be possible without determining centrally the precise information to be imparted or the teaching methods to be used.

Since the state obliges all children to stay at school until they are 16, do they and their parents not have the right to know what they can expect from the schools? I for one believed that when the Tory Party became the Government it had accepted the case for establishing a common core curriculum.

Sadly, the greatest chance there might ever be to bring some order and coherence into the schools has been missed by the Government. To describe the new DES document, *The School Curriculum*, as the firm

views of the Secretary of State once again demeans the use of the English language. For cliché and triteness the document is beyond belief.

All the agonising, the innumerable studies and reports over the last six years have been a diabolical waste of time if this is all they have led to: long overdue.

No one would deny the need for a broad curriculum, or the need to stimulate interest and imagination, but none of these need be frustrated. To my mind religious education—which remains the only subject with statutory status—or physical education, or health education or any of the innumerable options now available, are not as important as competence in maths, an appreciation of science and technology or an ability to write the Queen's English.

The fact that most other countries try to ascribe some priority to these things hardly seems to count with ministers, as they duck before the traditional posturing of the NUT and the local authorities. Leave it to the professionals, they cry. Heaven forbid, say I. But in private most teachers of my acquaintance admit a need for clearer guidance.

The NUT's response to *The School Curriculum* has been one of predictable overkill—"It foists on schools a pattern of uniformity that would stifle local initiative." It does not. It refuses—desperately—on the LEAs to heed its exhortations.

It might be worth reminding the Secretary of State, as well as the NUT, that the first paragraph of the 1944 Education Act says: "It shall be the duty of the Secretary of State to promote the education of the people of England and Wales and the progressive development of institutions devoted to that purpose, and secure the effective execution by local authorities under his direction and control, of the national policy."

To make his "firm" views stick, he now ought to consider amending section 11 of the Act to require LEAs to submit to him, by a certain date, a development plan for the curriculum in their schools. Let the schools decide the details, but the Government has a duty beyond stating its views.

Don's diary

Sunday

Leave Brisbane, where two ex-OU colleagues are now in charge of non-conventional areas of a conventional university (centre for advancement of teaching and learning and an interdisciplinary group on science and social policy) for Sydney. I choose the day on which the clocks are changed, and the airline timetables are changed—flight numbers and all. Marginal confusion, since no new time-tables are available. Qantas (after two weeks) is still on strike, however, another airline honours my ticket. A minor problem is that I don't know the person who is to meet me, or where, except that he is in charge of distance learning and (further education at state level in New South Wales. There is a marvellous network of hospitable "external studies" people who are prepared to look after curious visitors. We do meet and the rest of Sunday, being a day of rest, we swim and go down the coast from Sydney.

Monday

Meet with the head of the new multi-cultural television channel 0/28 in Sydney. It is mandated to meet the needs of ethnic minorities, now forming 37 per cent of Australia's population. It obviously cannot deal with all different nationalities, and therefore works through an analysis of languages, both first and second: Italian, French, German, Arabic, Serbo Croat, etc. Operating with no statutory base yet, its policy and programming is attracting much attention, some critical and some favourable. Producing about 25 per cent of its own programming, including world news with ethnic presenters, its main method is to buy the best from the rest of the world, putting it out with sub-titles: films from France, Italy, Israel and Poland all figured this week. Interesting analogies to be drawn with our new Channel Four, which is also required to be innovative and meet minority, although not specifically ethnic minority, interests.

Although it's not doing particularly well in the ratings game, these are, it seems to me, likely not to be the correct criteria for the success of such a channel. The Italian taxi driver who said "maybe it will open their eyes to our cultural heritage from Europe" is perhaps nearer the mark.

Tuesday

On the move again via Melbourne. Spend the day at Geelong. As with most of Australia, the majority of the population live in the capital cities, there being only a few small other towns. Geelong, the second largest town in Victoria has 125,000. Deakin University is perhaps the nearest analogue to the OU in Australia, charged with providing distance learning but also housing on-campus students. They are in their first week of term, and outside the buildings loudspeakers are blaring pop music, designed I was told, to make them feel at home. Students, like policemen, seem to me to look younger each year.

Lunch with the vice-chancellor and senior staff and then engage in a seminar with staff working on course development. Since there are many similarities in working methods with the OU, there is a lot to talk about.

Wednesday

Back to Melbourne to stay with the rest of the network, the head of external studies at the Royal Melbourne Institute of Educational Technology. Like our polytechnics, it is suffering from "social academic drift", and the lower-level technical college part is being separated off into a "tech". The fascinating difference for me is that most Australian institutions deal both with internal and external (often distance) stu-

dents at the same time and have done for decades. If the OU had not been set up when it was, would our conventional institutions by now be dealing with... external, mainly mature, students? Their problems are, however, the familiar ones of our extra-mural departments: status, marginality, lack of resources, no way of counting teaching hours for non-credit education.

Spend the morning with a very lively group engaged in the creation of distance learning materials for external students. Switch gear in the afternoon to do a seminar with the regular faculty including the director to "open their minds" to the likely impact of new technologies on their work. Shared platform with bright young American (female) expert on satellite technology—noticeable lack of females in audience. Tea with education unit. Over dinner two things were made clear to me, firstly that Australian wines are superb, and secondly that the British have much to learn from the Australian tradition of external education, and that more of us should go and find out about it. Didn't really have a chance to see Melbourne.

Thursday

Another early morning start, to Adelaide this time. In theory a more leisurely day. Shown briefly round the Open College of Further Education, an institution dedicated to distance learning at further-education level from macramé to science. Walk-in art rooms, library facilities and science labs can be used freely by distance students who happen to be in town for other reasons. A friendly tour rapidly turns into an intensive discussion with the staff who both produce materials and tutor their students themselves. The discussion is taped for use with students later.

Finally get away for an early evening wine tasting visit to the Barossa Valley wineries, sandwiched in before a dinner with a group of local academics interested in external and distance learning, including some very active feminists working with women's groups.

Friday

I am warned is the heaviest agenda of all, mainly at the Adelaide College of Arts and Education. Nearest analogue is a college of education turned college of higher education. The status of external studies here is the most ambiguous since the person in charge just deals with the "care" of external students but has no role in their teaching or the course content.

This lack of academic status does pose problems for him in getting an adequate "place in the sun" for external students. Sat in on a course team working on a proposed postgraduate diploma in distance education. Virtually all the group were conventional academics, and a major point of discussion ironically was whether or not such a course could or should properly be taught by distance learning methods. The other challenge was whether there was enough intellectual content to justify a course on "distance education".

Early bed, after midnight, as Qantas finally settles its strike and permits me to fly to Perth where two more ex-OU colleagues reign, one as head of extension at University of Western Australia and the other as dean of external studies at Murdoch. What they do on a shoestring in comparison to us gives food for thought. Small can be beautiful in distance learning. They tell me, and I agree that more of my colleagues should "continue their education" down under. They'll be assured of marvellous hospitality and very hard work.

Naomi McIntosh

The author is professor of applied social research at the Open University and soon to be one of the new Channel Four's senior editors.

Laurie Taylor



Dear Colleague,

As you will know from an earlier university notice we have been remarkably successful in averting some of the more extreme consequences which at first seemed inevitable after the news of the UGC cut in our budget for future years. Careless and uninformed rumours, which spoke of two hundred staff dismissals, can now be discounted. The bursar and I, in consultation with all relevant committees, are now completely satisfied that sufficient economies can be effected with the loss of no more than one hundred and forty three (143) permanent academic posts.

I am now writing to outline the details of the redundancy terms for such members of staff (as agreed at recent meetings of the Planning and Resources Committee). Unfortunately the present financial position of the university, even when complemented by UGC funds, does mean that these are not as generous as many (both in the university administration and AUT) would have liked. I hope however that the use which the committee has made of new superfluous campus resources will be seen as a rational way of compensating for the necessary restrictions upon actual cash payments.

Professor

£150 cash (One hundred and fifty pounds)

- (One) Office desk (large)
- (Six) Stacks of books (It is regretted that this item is not available to holders of personal chairs)
- (Two) Potted plants (Choose from Croton, Ivy, and Leopard Lily)
- (Three) Shelves of library books (4 - if selected from Russian Studies section)
- (Six) month free rental of Henry Moore sculpture (this item will be rotated among senior professors)

Reader

£100 cash (One hundred pounds)

- (One) Remploy bookcase (6 shelf model)
- (One) Blackboard with rubber and selection of coloured chalks
- (Four) Fire extinguishers
- (Two) Shelves of library books (3 - if selected from Theology section)

Senior Lecturer

£50 cash (Fifty pounds)

- (Two) desk diaries (with unused portions of 1981)
- Any 6 (Six) assorted signs (e.g. 'To the Department of Applied Linguistics', 'Social Science Inquiry Office')

- (One) Keam headed notepaper (various departmental logos: 'Philosophy', 'Medieval Studies', 'Education' etc.)
- Any 6 (Six) bound doctoral theses

Lecturer

£10 cash (Ten pounds)

- (Bound volume of A.U.T. bulletin (1980-1 set includes January 1981 editorial 'Not one job must be lost')
- (Three dozen) Assorted snapshots of staff members and students (various departments)

Untenured Lecturer

£5 cash (Five pounds)

- (One) signed photograph of the university chancellor

We are able to offer all departing colleagues (with the exception of untenured lecturers) a free life-time subscription to the magazine of the Alumni Society. The bursar also wishes to remind staff of his readiness to pay spot cash for good condition academic gowns and hoods.

LETTERS TO THE EDITOR

Salary strategy for the 1980s

Sir, - An advertisement appeared in the *Financial Times* for the post of general manager for investments of the Universities Superannuation Scheme at a salary roughly double that of a professor. May I suggest that the first priority of any salary strategy must be to get the top salaries and perquisites in universities raised to the levels paid to people of similar standing in industry, finance, the professions or government service. It may or may not be right that a coal miner can earn as much as a junior lecturer, but the real anomaly is at the top.

That is where the vicious circle of low pay, low calibre and low esteem is most dangerous. It is dangerous for its effect on the recruitment of brilliant and ambitious young women and men to academic careers. Moreover, low pay at the top means that the whole university pay structure is compressed below an abnormally low ceiling. A salary strategy for the 1980s should start by seeking to double the salaries

of professors. Next there is a need for a well-paid genuine promotion grade between senior lecturer and professor.

Once top salaries are right attention can be paid to the lower levels of the salary structure. The aim should be to attract the ambitious and brilliant to university teaching by its prestige and career prospects, not by inflated starting pay followed by plodding progress up a flattened salary ladder.

The USS advertisement promises a car as well. Business leaders in profit-oriented companies know that such perquisites or status symbols pay off in the calibre of staff. Why not a Jaguar for the professor?

Yours obedient servant,

PAUL MARETT
Department of Library and Information Studies,
Loughborough University.

Sir, - In view of the anticipated cash pressures on several universities over

the next few years, has anyone thought of reducing the salaries of academic staff? If not, why not?

Yours faithfully,
D.R. MYDDELTON
Professor of Science and Accounting,
Cranfield School of Management,
Bedfordshire.

Sir, - Would not one of the most painless ways of saving be a cut in lecturers' salaries, perhaps by the amount of the latest increase?

There might be other areas where minor savings can be made, such as fringe benefits, like travelling grants, or in certain areas of administration, for instance the excessive elaboration of exam procedures.

Salary the last elements to cut would be the variety of teaching and of courses offered so long as student demand lasts.

Yours faithfully,
Dr. STEFAN MUTHESIUS,
University of East Anglia

Sir, - Your item on criticism of the lack of sufficient contact and collaboration between industry and universities contained in the draft Advisory Council for Applied Research and Development report (March 6) prompts me to write more in sorrow than anger. It really will not do to make vague critical generalizations about there being not enough of this and that - a vast amount is going on and it has been increasing steadily since the Docksey Report on university and industry collaboration in 1970. Indeed it is doubtful whether the present amount of active collaboration can be sustained in view of the threatened university cuts.

Just a few facts may assist in getting the matter into perspective: there are more than 40 universities or colleges with a central facility to promote such collaboration and the Directory of University/Industry Liaison Services published biennially by the Group of University Directors of Industrial Liaison outlines the collaboration possible. The booklet *Research in Universities* published by the Committee of Vice-Chancellors and Principals in 1980 outlines but a small selection of the 2000 offered by universities as examples of the useful research presently being carried out, much of it in collaboration with industry.

Lastly, as evidence of active collaboration by members of this university, we have large numbers of visiting staff from industry and elsewhere and more than 40 at professional status.

Our sandwich courses continue to flourish in spite of the economic situation and placements in industry are still being found, albeit with some difficulties. Support for research continues and our research income has been more than £1.2M for the last two academic years. Furthermore, some of this research has led to exploitable inventions.

Other universities, I know, can quote similar case histories. Why on earth cannot government, civil servants and the press recognise and applaud that, whilst our primary purpose in universities is to train people, a very great deal is done by collaboration in engineering, science and the applied social sciences for the good of the community at large?

Yours faithfully,
J.D. LEGGE
Dean, Faculty of Arts
Monash University.

Sir, - We are both surprised and dismayed to read your report (THESE March 27) concerning Social Science Research Council plans to rationalise its committee structure.

As part of the social science academic community and recipients from time to time of SSRC funds, we have always strongly believed that one of the strengths of the SSRC lies in its multidisciplinary nature, with committees representing different areas of expertise. The cross-disciplinary nature of research applications has tended to maintain high standards of funded research throughout the social sciences, and the individual subject committees have themselves been responsible for valuable initiatives in their own disciplines. In our opinion, the abolition of committees such as statistics, and economy and social history would seriously weaken the role of the SSRC and would be counter to the rationale for the SSRC's very existence as a multidisciplinary forum.

We sincerely hope that the SSRC will not take such a step and will, on the contrary, do everything it can to promote the disciplines which in its present committee structure represent.

Yours faithfully,
B.B. BERNSTEIN
Professor in the Sociology of Education and Head of Sociological Research Unit

Sir, - There must be many members of the Convocation of the University of London who, like ourselves, live overseas and are on the inactive register, but who still take sufficient interest in the affairs of the university to wish to vote for a new chancellor. Ballot papers were, however, dispatched by post some weeks ago; the result had been announced.

Supposing that this might happen, we voted on Xerox copies of a friend's ballot paper (forwarded from the UK by airmail), with a note of explanation. We have not heard whether our votes were considered valid.

Yours faithfully,
S.E. RICHARDS
J.K. RICHARDS
Department of Geography and Geology, University of Hong Kong

The example Mr. O'Brien gives of bureaucratic emphasis on "relevance" and of bureaucratic suppression of academic freedom seem to be examples of health rather than sickness. Of course administrators try to put cases to governments which will appeal to the fund-givers and they will stress the "pay-off" aspect of research projects where they can. Of course academics reject the implication that social relevance is the proper criterion by which to judge academic behaviour.

The story of Professor Dunbar's circular (it did indeed go the rounds) could just as easily be taken as evidence for academic independence as the reverse.

There were indeed some strange prescriptions when Murdoch University was founded. They have been the subject of continuing argument both within and outside the university. The extracts quoted from the founding vice-chancellor, the professor of language and communications and the dean of social science, do not provide very clear evidence that a re-definition of the role of the university is under way.

On some matters O'Brien seems quite out of touch. CASAN (Concerned Asian Scholars of Australia and New Zealand) has never carried much weight in Australia. Its foundation was criticised by many on grounds similar to those mentioned by O'Brien. But the organisation did enrol many good scholars and it has contributed to the debating of issues of importance. Whether it should have carried weight is a matter for debate. In fact it has not been a success story.

And so one might go on. But perhaps this is more than enough to convey the embarrassment of one Australian academic at the possibility that such an unconsidered article should be taken as authoritative because of the prominence given to it in the *THESE*. There are indeed problems in Australian academia. They are not summed up effectively by Mr. O'Brien.

Yours faithfully,
J.D. LEGGE
Dean, Faculty of Arts
Monash University.

Keeping 'race' out of the census

Sir, - Martin Bulmer's article on the lack of a "race" question in the current census (March 20) is most interesting but, to one person concerned with the idea of race, did not seem to do complete justice to the objections to such a question. Census questions in general might be said to seek objective information, such as age, sex, marital status, size of house, or even place of parents' birth. "Race" is not an "objective" piece of information in this sense, any more than is, say, beauty, which is notoriously in the eye of the beholder. One's race depends upon context and contains a number of factors including skin colour and ethnic affiliation which may alter over time. There is no list of objectively existing races to which people can be allotted.

Indeed ambiguities in the various forms of question attempted by OPCS demonstrate this, as I tried to show in my article in *New Community* 7, 333-49, (Winter 1979). (That article was directed to the general ambiguity of "race", using the census as an example. The article of his own to which Mr. Bulmer refers, in the journal, was a reply to mine which with respect, misunderstood in part what I wrote.)

Objection on the grounds of ambiguity is in Mr. Bulmer's terms, a technical one, I suppose. This is not to say that there are no related political objections. The odds are heavily against it in squaring the circle result in essence in squeezing the population into either a few politically defined and politically contentious migrant groups, or into "the rest". Any comparisons made on census data would thus be limited to those groups and could say nothing about subgroups (say East African Asians or Irish or North Americans, or Western Europeans) and would tend to reinforce the numbers game. That this is a liberal in a cleft stick is a conclusive proof that there is no problem.

More objective information could perhaps have been sought by simply asking for skin colour (already included in the general household survey), immigration status (and parents' immigration status), or country of birth (and parents' country of birth). Such an approach would also have the advantage of compelling a clear decision on what groups were to be chosen, and why.

Yours faithfully,
R.M. WHITE
Faculty of Law,
University of Dundee.

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Yours faithfully,
S.E. RICHARDS
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The example Mr. O'Brien gives of bureaucratic emphasis on "relevance" and of bureaucratic suppression of academic freedom seem to be examples of health rather than sickness. Of course administrators try to put cases to governments which will appeal to the fund-givers and they will stress the "pay-off" aspect of research projects where they can. Of course academics reject the implication that social relevance is the proper criterion by which to judge academic behaviour.

The story of Professor Dunbar's circular (it did indeed go the rounds) could just as easily be taken as evidence for academic independence as the reverse.

There were indeed some strange prescriptions when Murdoch University was founded. They have been the subject of continuing argument both within and outside the university. The extracts quoted from the founding vice-chancellor, the professor of language and communications and the dean of social science, do not provide very clear evidence that a re-definition of the role of the university is under way.

On some matters O'Brien seems quite out of touch. CASAN (Concerned Asian Scholars of Australia and New Zealand) has never carried much weight in Australia. Its foundation was criticised by many on grounds similar to those mentioned by O'Brien. But the organisation did enrol many good scholars and it has contributed to the debating of issues of importance. Whether it should have carried weight is a matter for debate. In fact it has not been a success story.

And so one might go on. But perhaps this is more than enough to convey the embarrassment of one Australian academic at the possibility that such an unconsidered article should be taken as authoritative because of the prominence given to it in the *THESE*. There are indeed problems in Australian academia. They are not summed up effectively by Mr. O'Brien.

Yours faithfully,
J.D. LEGGE
Dean, Faculty of Arts
Monash University.

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The professional challenge

Professor Alwyn Smith's article on the need for a new, more humane and less technological curriculum for medical schools is the first of a series that *THESE* will publish over the next few weeks, and which will take a radical look at the state of professional education in Britain today. Subsequent articles will examine law, architecture, accountancy and other subjects which have played such a significant role in the moulding of our university tradition, despite Cardinal Newman's celebrated plea that useful knowledge was "a deal of trash."

Over the last few weeks we have been publishing a similar series of reports on the contemporary state of various para-professions (or sub professions), like nursing, social work, sport and journalism, which in Britain are perched precariously on the edge of higher education but in many other countries would be important areas of activity in universities and colleges. Unlike medicine and law, these new professional subjects are not part of higher education's past. But unless there is to be something very aberrant about British development they are likely to be part of our higher education's future as today's definition of that category expands to fill new social and economic needs.

Even leaving to one side post-Finist engineering, professional education is likely to be of increasing and exceptional importance during the 1980s, for two very practical reasons. First, this is the direction in which student demand has already begun to flow - towards the practical and the vocational (and the employable?). Both the "old" and the "new" professions have no difficulty in attracting students unlike some rival disciplines with a purer academic content. They have also begun to recruit many of the brightest school leavers. In today's atmosphere of concrete pragmatism, it seems, there are more students interested in making, than in remarking, society.

Secondly, it is clear that Government, whether Labour, Conservative or of some new social democratic

Whatever view is taken of these long-range questions, there is little room for doubt about the importance of professional and vocational courses within the development of higher education in the immediate future.

answer. They could argue that most Governments over the past 30 years have listened far too much to the advice of academic economists (and other academic experts). They might add that as this period had not been one of conspicuous economic or even social success the advice of such experts cannot always have been good. The fact that the "failure" of post-war Britain is largely a myth, and a dangerous myth, is not really relevant here. The majority of the electors agreed with Mrs Thatcher in May 1979. So, it must be presumed, they support her policy of getting tough with the British establishment.

Indeed, such an argument could be carried one stage further. It could be argued that the intellectual distress of economists, and of other academics, is the result of material discomfort. In the universities, the party's over the pipes are squeaking, or whatever other gauche metaphor is preferred. So, according to this hostile and cynical interpretation, when academics talk about threats to social and political stability, they are really talking about cuts in research grants, longer working hours, and threats to academic tenure.

There is just a sliver of truth in this - but no more. It is probably true that the direct attack on university funding and its attendant philistinism has Government this past winter has done nothing for its reputation among established academic opinion. After all, even monetarist economists are likely to be recent victims of their own ideology, and even the fiercely right-wing *Times* would have an easier

time to attack a university than to attack a Government. But the balance between informed opinion and democracy, and the capacity to maintain a tradition of public-spirited service, both very British characteristics, would be damaged. When the 364 economists write that present Government policy threatens social and political stability, they are perhaps righter than they imagine.

Yours faithfully,
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No noise is good noise



Patrick Nutgens

A few weeks ago the admirable Spike Milligan made in a letter to *The Listener* a resounding attack on muzak and since that is one of the internal nuisances of our day I want to add my attack to his. In that blistering letter he asked, "flow, in God's name, do we stop this muzak mania for the clinician of that most tranquil of moments in the universe, i.e. silence? It's bad enough having mindless creeps pumping billious muzak into every restaurant/hotel/shop/jiffy/supermarket/railway station and toilet (the latter being an ideal place). Travelling on Singapore Airlines, some mindless prole turned on Liszt's Hungarian Rhapsody when landing in Bombay - if only the music fitted the occasion. When I asked her to turn it off, the lotus maiden blanched and said: 'Not possible, company regulations.' "Elaborating on his theme, he muttered later on, "Background music is almost as lethal as Dutch elm disease - there seems no way of stopping it."

I know just how he feels. The north of England is littered with restaurants in which I have asked for the background music to be turned down or preferably off and I am familiar with the look of blank astonishment and disbelief on the faces of the waiters. Sometimes they go behind the scenes to take advice or possibly ring the police to check whether a lunatic has recently been let loose. Invariably they can't believe you mean what you say and ask you to repeat it. That of course may only be because they can't hear you in the midst of the din or have already gone deaf through over-exposure to noise. But in any case the answer is essentially the same: it can't be done, because of company regulations or because everyone else wants it even louder.

Well, do they? I remember a few years ago going rather early in the evening into a very good restaurant in Leeds with a friend. We were the first to come in, but the muzak was already at full blast. I asked if it could be turned off and got the usual reply: everybody else would want it on. A few minutes later a coach-load of solid Yorkshire ladies came in and sat at a long table reserved for them; the officer in charge sent straight for the waiter and said, "Turn that damn row off so we can hear ourselves think."

I have come to the conclusion that very few people want the row on. In fact there are only two types who do. One is the man who is taking a girl out for the evening and cannot think of anything to say or suspect that she is so thick that she won't be able to say anything in return, so it's better just to look across the table before shambling off to a disco and being totally deafened. The others are the waiters.

The muzak is really there for the waiters. In rare moments of indelicacy they will tell you that if the music is loud enough customers will eat quickly and move on and make way for another lot of munchers. ("We don't really want people like you, sir, who have a nasty habit of sitting here all evening and talking instead of eating and drinking and getting out"). But that is not the main reason. The main reason is that they like it themselves.

I can see their point. It must be pretty boring looking at rows of faces chewing and glistening and the music might suggest happier times and far

away places. If it is a fast moving eating house the food is probably the same whatever it's called on the menu so it may not matter if they can't hear what you order. Or perhaps all waiters take lessons in lip reading and don't need to listen at all. I don't suppose waiters' conversation is all that sparkling anyway - "well done, medium rare, etc, etc." It's hardly enough to keep the mind alive.

The reason why it matters is that canteen conversation has always been one of the pleasures of a civilised life, and more than that, one of the contributory causes of civilisation itself. If customers in 18th century London coffee houses or 19th century Parisian cafes had been unable to hear what anyone else was saying, our cultural heritage would have been immeasurably poorer. Poems would not have been written, volumes of history would have been untested, paintings would not have got into the minds of the artists and journalists would have had no copy. Come to that, what would publishers do if they couldn't take authors out for lunch to while away the day pleasantly and remind them that it would be nice to see a manuscript sometime? And, more significantly, what would the authors do if they didn't get those lunches to stuff off the evil day of having to hand in the goods?

So I have decided that it is time to do something about muzak and have consulted some of my colleagues in electrical engineering to see if they can come up with the right kind of weapon. If people in films like James Bond can go round heavily guarded buildings with a pocket gadget that opens doors and slices metal up or just the other way round, it must be possible for a modern electronic engineer at the frontiers of knowledge to make a little thing that will wreak havoc in the world of muzak. All I need is what I am advised is called an electronic suppressor; with a flick of the switch, into a destructor. The effect will be instant and dramatic.

Imagine going into a restaurant with the usual burrage going on, sitting at a table, ordering some food from the menu and waiting quietly for the food. A little gadget like a cigarette pack in the right direction so that the muzak either (a) dies down to nothing, (b) starts screaming, shuddering and driving customers mad or out, or (c) as a last resort makes the muzak box explode, with lengths of tape spilling out over the floor and the machine sizzling gently and subsiding into a small liquid stain in the corner. It will be a winner; we shall patent it and make a fortune. Restaurant owners will ring us up and say, with mounting hysteria, "We promise to turn off all the muzak and sack all the waiters, and in any case how would you like a few thousand pounds or indefinite free meals brought to your own house if you will just destroy the destructor?"

The possibilities are endless. A useful refinement would be a selective suppressor which would turn off background music in films while leaving the talk and the gun shots, so that when you see a fine landscape there is no longer a symphony orchestra lurking behind the rocks and making a noise and frightening all the birds away.

Pictures and music ought in any case to be kept in their proper places and only come together for a special effect. The person who had that best organised that I ever met was a colourful lady who used to keep the Chain Pier Bar on the front at Newhaven in Edinburgh at the side of the River Forth. The old chain pier, which had been a popular place for perambulation in the late 19th century, had been taken away by the time I knew it, but the bar had a timelessness about it which owed something to the lady herself. She was hideously made up, as tough as any sailor who came in and ruthless with customers she didn't like and threw out. There was a shrunken head hanging above the bar.

She had a television set and kept it on. But because she preferred the radio, whereas her customers often preferred the television, she had both on at the same time - the television with pictures but no sound, and the radio with sound but no pictures. The effect was both baffling and symbolic. I remember one evening watching Field Marshal Montgomery talking in his rapid clipped way, but actually giving a football commentary. She stood there looking quizzical and supercilious but I fancied there was a small tight smile occasionally at the corner of her scarlet mouth. We wouldn't have dared to ask any questions.